A

RETROSPECTIVE VIEW

OF THE

Scots Fiſheries;

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WITH

OBSERVATIONS AND REMARKS,

HUMBLY SUGGESTING THE

PROBABLE MEANS OF PRESERVING AND IMPROVING THEM.

WITH

An ESSAY to the Highland Society of *Edinburgh*,

AND

A LETTER to the Right Hon. the Earl of Breadalbane, Vice-Preſident of the Highland Society of *London*.

By GEORGE PITCARNE,
Captain of the City Guard of *Edinburgh*, late Merchant there.

TO WHICH ARE ADDED,

Copies of Fourteen Letters (ſigned C. F.) that were publiſhed in the Edinburgh Evening Courant in Auguſt 1786, which contain many Valuable Hints to Fiſhers, who may be greatly improved by them, and will be uſeful to future Ages.

SECOND EDITION.

Sma' is our need to toil on foreign ſhores,
Whan we hae baith the Indies at our doors.
ALLAN RAMSAY.

EDINBURGH:

1787.

[PRICE TWO SHILLINGS.]

TO THE HONOURABLE

BOARD OF TRUSTEES

FOR PROMOTING

THE MANUFACTURES AND FISHERIES

IN SCOTLAND:

THE FOLLOWING PAGES

ARE HUMBLY DEDICATED

BY THEIR MOST OBEDIENT,

HUMBLE SERVANT,

GEO. PITCARNE.

A

RETROSPECTIVE VIEW, &c.

THE early ſtate of the Scots Fiſhery can beſt be aſcertained from the laws regarding it. By theſe it appears, that, owing to the frequent interference of the Legiſlature, the Fiſhery was often materially injured; laws being enacted, which tended to obſtruct the natural courſe of that trade, and to promote only a narrow and confined monopoly.

It will anſwer the preſent purpoſe, to ſtate the progreſs of the Fiſheries, from the year 1707, the happy æra of the Union, to this day.

In the Treaty of Union, particular attention was paid to the Scots Fiſheries.—By it, the ſame premiums or drawbacks were allowed in Scotland, upon all fiſh exported, as in England; and a particular ſpecification was made, of an allowance of 10s. 5d. *per* barrel of White Herings exported from Scotland, under this reſtriction, That all ſuch fiſh were to be cured with foreign ſalt only. At that time, too, Scotland enjoyed an exemption, for ſeven years,

years, of all duties on Scots ſalt, and was afterwards to pay only a fixed proportion of the duties payable in England; a meaſure highly reaſonable at that time.

The allowance ſpecified in the Union Treaty, of 10 s. 5 d. *per* barrel, on Herrings exported from Scotland, being more, nay almoſt double, of what was allowed in England, an act was ſoon after paſſed, raiſing it to the ſame rate there.

The Funds allotted for payment of theſe allowances on fiſh exported, were the duties on ſalt. Theſe were called drawbacks, being conſidered as equal to, or in lieu of the duties paid, or ſecured, of the ſalt with which the fiſh were cured. It very ſoon appeared, that there was either an error in the eſtabliſhment, or ſome latent malpractices exiſted; the duties paid or ſecured on the ſalt in Scotland, being greatly ſhort of the debentures claimed on the fiſh; whereas the former ſhould have compenſated the latter. For relief of the holders of ſuch debentures, an act was paſſed about the year 1719, allowing ſuch as were then unpaid, or that ſhould become due, to be paid out of the Exciſe in Scotland.

The Fiſheries were carried on, with theſe allowances on exportation, until about the 1721; when the continued frauds on debentures excited public attention, in ſo far as concerned the Revenue; and the great diſcredit of the Britiſh fiſh abroad, in conſequence of theſe frauds, called loudly for redreſs, to recover their reputation.—

Accordingly,

Accordingly an act was paſſed, diſcontinuing the large allowance on fiſh exported, and permitting the importation of foreign ſalt into Britain, free of duty, for curing fiſh for exportation, and Britiſh ſalt to be taken for the ſame purpoſe, duty free; and bounties upon exportation were then fixed, at the rate of 2s. 8d. *per* barrel of white Herrings, and 3s. for every quintal or hundred weight of Cod or Ling, thoroughly dryed, being the ſame as at this day.

The great diſcredit of the Britiſh fiſh abroad at this time, as it was a ſevere blow to the Fiſheries of this country, occaſioned a proportional increaſe of that trade to other nations. It was not till this period, that the Herring Fiſheries in Norway were ever heard of, they being hitherto eſteemed a market for our herrings, as they had till then confined themſelves ſolely to the fiſhing of Cod and Ling.—It does not appear, whether the Norway Herring Fiſhery happened in conſequence of the fiſh ſhifting to that ſhore, and thereby inviting the Norwegians to follow out that trade, or if the diſrepute of the Britiſh herrings in the Baltic markets had encouraged them to try it.

About this time, the free burgeſſes of the Royal Burghs opened a ſubſcription for the Herring Fiſhery, probably in the view of wiping off the odium which the Scots Herring Fiſhery had incurred abroad, thereby aiding the act for recovering the credit of the Britiſh Fiſheries in foreign parts, and diverting the trade out of the courſe it had occupied for ſome years. This undertaking,

ing, it is believed, did much public good; but though in ſo far highly commendable, yet, as it was gone into ſingly with that view, without any regard to the Fiſheries becoming a ſole object of buſineſs for individuals, the fiſhers in a few years loſt moſt part of their ſmall capital, and dropped the Fiſhery; but had the ſatisfaction indeed of inſtructing other fiſhers to cure and dreſs their herrings in a proper manner for foreign markets, as well as for home ſale.

For twenty years preceding 1740, the Fiſheries in Scotland ſeem to have been carried on nearly in their natural channel, as much reformation being made as could well be expected, after ſuch malpractices. The quantities of fiſh exported in this period, appear from the bounties paid, being, at a medium, *per annum*, 5448l. at 2s. 8d. *per* barrel, and 3s. for every hundred weight of Cod or Ling.

The home markets have always been ſupplied; to what extent cannot be ſo well aſcertained.—It may ſuffice to obſerve in general, that, as the people came to live better, the conſumpt of ſalted herrings was proportionally leſs than for forty years before.

From the beſt information that can be got, the price of herrings, during the above-mentioned ſpace, run from 12s. to 15s. *per* barrel to the merchant for exportation; and the beſt weſt country Lewis herrings were brought to Leith, and there ſold for inland conſumpt, at from 18s. to 21s. *per* barrel.

From

From the 1740 to 1750, the Legiſlature did not much meddle with the Fiſhery; few new laws being made, regarding either it or the ſalt-duty, with which it has an immediate connection. During this period, there appears a very remarkable decreaſe in the exportation, the bounties being only, at a medium, *per annum*, 3406l. at 2s. 8d. *per* barrel, and 3s. for every hundred weight of Cod or Ling.

There were, at this period, circumſtances very unfavourable to the Fiſheries—A rebellion in the country. Officers were hindered from doing their duty, and the offices ſhut.—Every merchant kept what money he had, being afraid to riſk it in trade.—This convulſion, however, Providence made the means of eſtabliſhing a degree of perſonal liberty, little known before in the remote parts of the country; property having been thereby ſecured, and protection granted from the unjuſt and illegal exactions of the chiefs, landlords, and their factors, by an act of Parliament made about this time, throwing the heritable juriſdictions into the hands of the Crown.

From the laſt-mentioned period down to the 1760, the Fiſheries ſeem to have been ſucceſsful, many ſalutary laws relative thereto being paſſed about this time, to be afterwards more particularly noticed. The bounties on exportation, during this period, amount, at a medium *per annum*, to 7738l. at 2s. 8d. *per* barrel, as above.

A new opening in the Herring Fiſhery happened at this period.—In 1754, a ſhoal of Herrings appeared at Gottenburgh, which has ever ſince continued to be uniformly the caſe there, though a thing formerly quite unknown. The Swedes did not for ſome years avail themſelves properly of this advantage.—In the courſe of this tract, the conſequences of their negligence, ſo far as reſpect the Britiſh Herring Fiſheries, will be noticed.

The two acts 1750 of Geo. II. ch. 24th, and Geo. II. ch. 30th, both giving bounties on the tonnage of veſſels employed in the Herring Fiſhery, being quite a new mode of encouragement, will be attended to. Under theſe acts, veſſels were fitted out, which, in ten years time, caught 2419 barrels of herrings, called Sea Sticks, that is, unpacked, or only packed at ſea; of which 18 barrels go to the laſt, or equal to 12 barrels of ſufficient packed herrings; making 1613 barrels of proper packed herrings, fit for home ſale, or for exportation; and, if they had all been exported, the bounty would, at 2s. 8d. *per* barrel, have been 215l. 3s. 4d. or, taking an annual part of the above number, being 161 barrels, the bounty would only have amounted to 21l. 10s. yearly. Such a trifling quantity hardly deſerves notice, either for home ſale or for exportation. At this time, too, the Fiſhing was very little benefited by the buſſes; though, for this experiment, a bounty on the tonnage, for the firſt ten years, was paid, of no leſs than 3459l. 16s. which is at the rate of 2l. 2s. $3\frac{1}{2}$d. for every barrel of proper packed herrings they brought to market, being double their value.

The

The laws which tended to do permanent good to the Fiſheries, were, 20th of Geo. II. ch. 43. (1747), aboliſhing heritable juriſdictions, and giving ſecurity to property, and act 20th Geo. II. ch. 23. effectually ſuppreſſing the barbarous and unjuſt exactions of the laſt night's fiſhing in the week, by the ground owners, or their factors, denominated *Saturday night's fiſhing*; as alſo of 16 s. 8 d. for the privilege of wetting their nets, called *ſize-money*.

Theſe laws have done more good than any ſums that can be given in buſs bounties, and are a real ſervice done to the Fiſhery. Beſides, Britons, without diſtinction, are allowed the privilege of Scotſmen in the Fiſhing, which is attended with many good effects. By theſe laws, protection is afforded from injuries; and the benefit of the common beach, with a few yards of waſte ground, are granted, which are ſtrong incitements to this branch of induſtry, and occaſion great ſucceſs to the Fiſhery.

By act 29th Geo. II. ch. 30. (1756), the privilege of taking Britiſh ſalt, duty free, for curing fiſh for exportation, was likewiſe extended to Scotland, with an option of entering, for home uſe, herrings ſo cured, upon payment of 1 s. *per* barrel of duty, in lieu of the duty upon the ſalt uſed in curing them:—A moſt important advantage to the Fiſhery.

We have formerly ſeen the home markets ſupplied with herrings, the export trade not at all inconſiderable,

and yet the poor laborious boat-fiſhers, who are the ſource of the whole, in no manner of way encouraged, but, on the contrary, harraſſed and oppreſſed. Indeed, ſince 1756, they have been protected; but they have no public encouragement for their induſtry; nay the reverſe, owing to the partial diſtinction made between them and the fiſhers in decked veſſels, who alſo fiſh with boats themſelves, and in the ſame lochs and grounds with them: Beſides, though moſt of their cargoes are caught by the boat-fiſhers, who have only a ſmall price for them, yet the owners of theſe decked veſſels have been paid by Government, during the ſpace of ten years, from 1760 to 1770, at the rate of 17 s. 5½ d. for every barrel they brought to market, which has been the cauſe of great emigrations, ſo very hurtful to the country.

The boat-fiſhers, however, ſtill continue, though not ſo numerous as they were; and though it is to them that the country owes the requiſite ſupply, and by their means that the foreign trade is moſtly furniſhed, yet they have no public allowance for it, not having any agent to plead for them.

The fiſhers on the bounty have never brought the neceſſary ſupply for either the home or foreign markets, though they have effectually drained the Commiſſioners of the Cuſtoms of every ſhilling under their management.

During the ten years preceding the 1770, the moſt remarkable matter relating to the Herring Fiſhery is, that the funds in Scotland, allotted for payment of the bounty on tonnage, fell ſhort of the demands; and no wonder, as the experiment ſometimes ran ſo high, as to demand above 30,000 l. *per annum*.

The adventurers who followed after the bounty where it was to be had, found their way to an Engliſh port, Whitehaven, as will afterwards be more particularly noticed.—The quantities of fiſh exported do not increaſe in this period, notwithſtanding of the very large ſums claimed as bounties on the tonnage of veſſels employed in the Herring Fiſhery, the bounties on fiſh exported being only, at a medium, *per annum*, L. 6026, at 2 s. 8 d. *per* barrel, and 3 s. *per* hundred weight of dried cod or ling.

Theſe veſſels, in this period, caught 102,886 barrels of proper packed herrings, fit either for home ſale or exportation, which is, *per annum*, 10,288 barrels; and, if they had all been exported, the bounty, at 2 s. 8 d. *per* barrel, would have been L. 1371 : 14 : 8 : yearly, which is but a ſmall part of the above L. 6026, and ſhows moreover the inconſiderable ſervice they did, in furniſhing herrings for the foreign markets: Beſides, had there been no other fiſhers for the home markets, the people in Scotland would not have been ſupplied with one third of what was neceſſary for their uſe. Theſe veſſels, however, received a bounty on the tonnage, out of the cuſ-

toms,

toms, of no leſs than L. 143,020 : 17 : 10, being at the rate of L. 1 : 7 : 9½ : for every barrel they brought to market.—This occaſioning a failure of the funds for payment of theſe bounties in Scotland, the fiſhers on bounties went to Whitehaven, where they fitted out, and got licenſed, which entitled them to payment in England, although they diſcharged in Scotland. Accordingly, they obtained payment in England, in the years 1768 and 1769, of no leſs than - - - L. 16,398 15 0

Which, with the foreſaid ſum in Scotland, of - - - 143,020 17 10

In theſe ten years makes in all L. 159,419 12 10

Such immenſe ſums, given to one ſet of men, in preference to the poor boat-fiſhers, is abſurd, eſpecially as they fiſh in the ſame lochs together. Some of theſe lochs are ſo narrow at the entrance, that a net may ſhut them up, as Loch Broom, Loch Sunart, &c. being only about 20 fathoms broad, but widen within *. At theſe places, and indeed on all the weſt coaſt of Scotland, it is well known, that the fiſhing can be better and cheaper done by the natives, who fiſh for their own behoof with their open boats, than by hirelings, or any other mode whatſoever. It is therefore not to be wondered at, if this great public bounty, and the parade theſe bounty fiſhers made, diſcouraged the poor induſtrious natives, who had no friend to act for them, nor any perſon

* See Mr Murdoch M'Kenzie's Maps.

perſon to ſtate their caſe properly before Parliament in making that law.

Patrick Lindſay, Eſq; ſome years ago Lord Provoſt, and Member of Parliament for the city of Edinburgh, who wrote a Treatiſe on the Scots Fiſheries, ſays, That 2000 boats were uſually employed on the Weſt Coaſt fiſhing annually, when the fiſh were on that coaſt; and that it is a ſeminary for breeding and employing from 12,000 to 14,000 ſeamen yearly. He alſo mentions the fiſhing on the Eaſt Coaſt of Scotland, and that of herrings in particular. He ſays, that, when ſucceſsful, there were from 600 to 800 boats, with eight or nine men in each, employed in the Frith of Forth, (Edinburgh); and that there were in the Murray Frith from 500 to 700 boats, with ſix or ſeven men in each: And adds, That the coaſt fiſhing in theſe two friths employs above 3000 fiſhermen and ſailors, for more than two months in the year, and is a ſource of breeding above 7000 ſeamen annually, who earn their bread by their labour on ſhore near ten months in the year, being all working artificers, carpenters, coopers, net-makers, day-labourers, and farmers ſervants, that live near the coaſt, and make it a condition with their maſters, to be allowed the drave to themſelves, when the herrings are on the coaſt. In this trade, he ſays, a body of about 20,000 ſeamen may be raiſed yearly, at no expence to the State; which is infinitely beyond what any trade can do that is forced by bounties.

The

The law, granting L. 2 : 10 : of bounty on the ton of veſſels fitted out for the Herring Fiſhery, expired in 1771; and a new law was made, allowing L. 1 : 10 : *per* ton of bounty upon veſſels fitted out for that purpoſe, which commenced 22d October that year. It ſhortened the time required for the veſſels to continue at the fiſhing, admitted of carrying a leſs quantity of nets, and allowed, for payment of the bounty, all the money under the management of the Commiſſioners of the Cuſtoms in Scotland; which falling ſhort, then the whole under the Commiſſioners of Exciſe to be ſubject in payment of the ſaid bounty; and, in future, veſſels, the property of perſons reſiding in Scotland, are to proceed from Scotland only.

The fiſhers on the bounty continued, until the exiſtence of this act, to fit out chiefly from Whitehaven, and to diſcharge in Scotland; by which means, they received, in the years 1770 and 1771, from the Engliſh cuſtoms, L. 40,900 : 12 : 6 : of tonnage bounty. The bounties paid in Scotland from 1770 to 1779, amount to L. 109,069 : 17 : 10. In this period, the veſſels caught 188,151 barrels of proper packed herrings, making, at a medium, 20,905 barrels *per annum;* a quantity greatly ſhort of what the home conſumpt required in Scotland, and which, had they all been exported, would, at 2s. 8d. *per* barrel, have amounted only to L. 2787 : 6 : 8; a very trifling proportion of the export trade.—The bounties paid at this time on the tonnage of veſſels, were at the rate of 11s. 7d. for every barrel of herrings they brought to market.

The

The bounties on fiſh exported during this period, were, at a medium, L. 7836 *per annum*, at 2 s. 8 d. *per* barrel, and 3 s. *per* hundred weight of dried cod or ling.

During the laſt nine years, the tonnage bounty fiſhers were paid in Scotland - - L. 119,323 0 2
And in England - - - 40,900 12 6

L. 160,223 12 8

being at the rate of above 17 s. 5½ d. for every barrel brought to market.

The whole bounties on tonnage paid out of the Scots revenue, from 1750, the time of their commencement, to the 1779, were - - - L. 255,550 6 6
Thoſe in England - - 67,598 15 0

Total L. 323,149 1 6

Notwithſtanding the payment of theſe great ſums, the markets were no better ſupplied than formerly, nor more fiſh exported, and the prices as high as they uſed to be.

Thus having given a ſhort narrative of the Scots Herring Fiſhery ſince the Union, it is obvious what laws obſtructed, and what promoted that moſt uſeful and valuable branch of trade.

It appears that the laws made about the Union tended to obſtruct the trade and induſtry of many, being ſolely calculated

calculated to ſerve the purpoſe of a narrow and confined monopoly.—In the Treaty of Union, the Scots Parliament were very zealous in favour of the Scots Fiſheries. Their zeal and ſucceſs, however, in obtaining an exorbitant bounty of 10s. 5d. upon the barrel of herrings exported, tempted many to commit frauds, and, in the ſpace of 12 years, brought reproach and diſcredit upon the country and the Britiſh fiſh abroad, to the inexpreſſible hurt thereof, and great decreaſe of the revenue.

It appears that the large bounty on the tonnage of veſſels fitted out for the Herring Fiſhery had likewiſe occaſioned a greater diminution of the revenue than was before known, and has done no good, as theſe veſſels have neither brought better fiſh, lowered the price, nor increaſed the quantities at market.

It appears, that by giving a bounty on a native commodity brought to market by one ſet of men, and no bounty on the ſame article, though of equal goodneſs, brought by the boat-fiſhers, the poor, induſtrious, and laborious ſet of men, is a diſtinction never before known in the revenue laws, and has certainly been overlooked in making out that law, as theſe men are the moſt numerous, and the ſtrength of the Fiſhing.—*They ought to be encouraged in a very particular manner, and the bounties on fiſh ſhould be upon exportation only, making no diſtinction who are the fiſhers, or how they are caught, if only by Britiſh or Iriſh ſubjects. The fiſhers of both nations ought to be allowed to fiſh upon each other's coaſt, without*

without interruption, ſeeing they are the ſubjects of the ſame Monarch, and may be uſeful to each other, by learning to catch, cure, or dreſs their fiſh, better than they did formerly.—But theſe advantages ought only to be enjoyed by thoſe who are at pains to cure and pack their fiſh properly; a circumſtance that ought to be moſt carefully attended to, as the reputation and credit of the country depends upon it, and which was in ſome meaſure amended in laſt Seſſion of Parliament, which gives the poor boat-fiſhers ſome premium for what they catch, and will encourage them to be at pains to catch and cure more fiſh in time-coming, which will be of great ſervice to the country, and will prevent emigrations. With this view, it is here proper to mention the Scots act 1693, directing every burgh to appoint a man of judgment and ſkill to inſpect all fiſh exported out of his precincts, and to affix the burgh's mark upon all caſks that are ſufficiently cured and packed.—This law is ſtill in force; but the act, called *the Freedom or Communication of Trade for Export and Import*, extended to other places beſides the Royal Burghs: In 1698, of courſe, no burning iron or mark was uſed at many places; and that meaſure is now much in diſuſe; though, in the few towns where it is continued, it is of great ſervice, ſuch as Aberdeen, where the cuſtom ſtill prevails, cauſing their ſalmon to give 8 or 10 ſhillings *per* barrel more than any others, at ſeveral of the foreign markets: Beſides, it excites a laudable emulation to preſerve reputation once acquired, and is the means of directly detecting frauds when committed. This plain and ſimple

regulation tends more to keep up the reputation of fiſh exported than any other; and the omiſſion of it has been an inlet to fraud, to the great diſcredit of our Fiſheries in foreign parts. It has a ſimilar effect to the Sterling mark upon plate, the ſtamp upon Scots and Iriſh linens, &c. &c. which is to be obſerved in future by the late act of Parliament, and will be of great uſe.

With reſpect to the Gottenburgh Herring Fiſhery, already mentioned, the immenſe quantities imported from thence into Cork, and other ports in Ireland, were very properly attended to ſome years ago by the Iriſh Parliament. Theſe herrings were moſtly reſhipped to the Britiſh Weſt Indies; and the duty at importation was paid, after retaining only 1s. 6d. *per* barrel. But, by an Iriſh act, 17th and 18th Geo. III. ch. 8th, § 33d, it is enacted, That, after the 21ſt of June 1779, no drawback of any duties ſhall be allowed upon exportation of fiſh imported into that kingdom.—The duty is 4s. *per* barrel, which being retained at exportation, will be in favour of the Britiſh fiſhers, in ſending their herrings to the Weſt Indies, as they can afford to ſell their fiſh ſo much cheaper than the Gottenburgh herrings.

It is with pleaſure I now proceed to enumerate the uſeful acts, and their good effects.

The act aboliſhing the heritable juriſdictions, 1747, ſecured property and perſonal liberty; and the act in 1756 gave fiſhers protection from oppreſſion, and granted every indulgence

indulgence the ſalt laws could admit of. By it, Engliſhmen (who were before forbid) were admitted; and men of ſkill and property have thereby been induced to ſettle at Iſle Martin in Loch Broom, in the heart of the Fiſhery. They have erected red herring houſes, and buy their herrings from the boat-fiſhers there, which is of great ſervice to the poor people, and to the country in general: And in all this, they are followed by Scotſmen at the ſame place; and there are, beſides, fiſhers with open boats, who, finding their advantage in it, come from Northumberland to the Frith of Forth in the time of the herring fiſhing, and ſhould be encouraged.

The Scots act directing the burgh mark, if it could be extended to all ports from whence fiſh are exported, would ſurely be of great ſervice, and is truly worthy the notice of the Legiſlature. This is noticed by the laſt act of Parliament, and will be of great uſe.

The proper regulations mentioned by Mr Lindſay, of the herring drave*, which are the ſame with thoſe obſerved at this day, and excel every thing yet deviſed, for promoting attention, care, and ſucceſs in the Fiſhing, it is humbly thought, deſerves the attention of the Legiſlature, and ought to be kept in force.

The merchants aud monied men, ſome years ago, were in uſe to fit out veſſels from 40 to 100 tons burden, with ſalt, caſks, coopers, money, meal, ſpirits, ſnuff, tobacco, &c.

* See his Book in the Advocates Library at Edinburgh.

&c. and ſent them to the Lewis, and the lochs and fiſhing grounds where the boat-fiſhers were, and purchaſed from them their cargoes at very low prices, which was of great uſe to the country. It has been reported that ſome of the veſſels on the tonnage bounty did no more;—thus adding perjury to fraud, which high bounties often tempt.

The Norwegians fiſh their herrings in open boats; the Swedes do the ſame. Each of them, at preſent, as to quantities, do more than the Dutch, whoſe ſituation does not admit of fiſhing in open boats.

The fiſhing on the Weſt Coaſt of Scotland is reckoned more certain, conſtant, and uniform than that on the Eaſt Coaſt; the ſmooth water in the lochs and bays, it is thought, inducing the herrings to come there in great ſhoals to ſpawn in their ſeaſon.

The Friths of Forth and Murray, till of late, had been for ſeveral years much deſerted; but the fiſh have been, and are at preſent, in great plenty in thoſe places, and the Fiſheries are there carried on to a great extent; particularly at Dunbar, where they cure great quantities of both white and red herrings to a conſiderable value, and no bounties aſked, except upon exportation.

Follows a ſhort Account of the COD *and* LING FISHERIES.

THIS branch of Fiſhing admits of very great improvements, and may be greatly enlarged; but it has been much neglected for many years paſt. The greateſt Fiſhing of this ſort in Scotland is in the iſlands of Shetland; and, ſeveral years ago, this branch of Fiſhing was alſo carried on to a great extent in the iſlands of Orkney, and in moſt of the Weſtern Iſlands, in the Murray Frith, and all around the coaſts of Scotland. At preſent, and indeed for theſe many years paſt, this Fiſhing has been confined to the iſlands of Shetland, at leaſt for exportation; altho' there are ſurely both Cod and Ling in great plenty upon all the coaſts of Scotland; but the fiſhers are not at pains to ſeek after them, not having any encouragement for doing ſo. But if a Premium was given to every Fiſhing Boat annually, for following after the White Fiſhing, according to the number of men, and quantity of lines or nets, they carry, and to be obliged to go to ſea every lawful day the weather will permit, at leaſt for a certain number of days in the year, that ſort of Fiſhing will be found very ſucceſsful.

And as the bounties upon theſe fiſh when exported are by far too ſmall, being only 3s. for every hundred weight or quintal that are quite dried, and 5 s. for every 120 fiſh not quite dried, of a proper ſize, it is humbly propoſed, That an additional bounty ſhould be given upon

on thoſe fiſh when exported, as afterwards to be taken notice of. And as there is another fiſh caught in Shetland, of which there is great plenty, called Tuſk Fiſh, which is finer than Cod or Ling, but ſmaller, there ought to be a bounty alſo allowed upon them when exported; which additional bounty would encourage the fiſhers to follow out that trade to a much greater extent, and would likewiſe be the means of cauſing the fiſhers, in the different places where that trade was formerly proſecuted, to attempt it again with more life and ſpirit; with this expreſs proviſion, That the inſpector or ſhipping officer be allowed, by law, to take ſamples of the fiſh, when he thinks them not cured or dried as the law directs, (the owners being allowed a reaſonable price for the ſame), until he has inſtructions from the Commiſſioners, whether they are to have debenture for the one or the other bounties, *by the weight*, or *by the number*, which is very material, as many pernicious miſtakes have often been committed in this article, the officer not knowing preciſely which of the bounties ſhould be allowed, and thereby, though perhaps unintentionally, materially hurting the Revenue.—This is alſo noticed by Act of Parliament laſt Seſſion.

And as it often happens, that the quantities at one place are too ſmall to export, may lie a dead ſtock on hand, and ſo be liable to periſh before next ſeaſon, which often happens in times of ſcarcity of proviſions, (as was the caſe two years ago), the owner ſhould be allowed to ſell them at home, upon paying the ſalt-duty.

The

The following Hints are humbly propoſed as Regulations for the probable means of preſerving and improving the Fiſheries in Scotland.

1*ſt*, That the bounty on the tonnage ſhould be only 20s. *per* ton, and no veſſels to have bounty below 15 tons, nor any above 100 tons burden, which will make them venture farther out to ſea, where the fiſh are both larger and better.

2*d*, That a bounty be allowed of 5 s. *per* barrel of White Herrings exported, properly cured and packed, and the year and name of the port from whence they are ſhipped, to be marked on each barrel with a burning iron, in capital figures and letters.

3*d*, That the bounty upon Cod or Ling exported, ſhould be 10s. for every 120 fiſh of a proper ſize, as in the Book of Rates, that are not quite dried, but properly cured.

4*th*, That a bounty of 5s. be given for every hundred weight or quintal of Cod or Ling exported, that are *thoroughly dried*, properly cured, and of a proper ſize.

5*th*, That a bounty ſhould be allowed upon Tuſk Fiſh exported, of 2s. 6d. for every hundred weight or quintal that is thoroughly dried, and 4s. for every 120 Tuſk Fiſh that are not dried, but properly cured.

6*th*, That oil being made from the livers of moſt fiſh,

and

and an article uſed in ſundry branches of manufacture, ſuch as making of ſoap, tanning of leather, greaſing of wool, burning in lamps, &c. it ſhould be encouraged, and a bounty given for the making of it, of at leaſt 2s. 6d. *per* barrel; no matter whether it is exported or not, if it is good; but if it is not good, it ought to be confiſcated, and the owner fined, if he claims the bounty.

7th, That the boat-fiſhers ſhould be encouraged in a particular manner, and ſome premium given them; which would be an effectual method of eſtabliſhing the Fiſheries for ever, and of increaſing the number of fiſhers. To that end, the following hint is humbly propoſed: That each boat be numbered in every diſtrict, and a bounty given to each boat for the ſeaſon, from L. 5 to L. 10, according to the number of men, and quantity of lines or nets they carry; or to allow them a bounty of from ſixpence to a ſhilling for every barrel of freſh or green herrings they bring to ſhore, and ſell to merchants, buſs fiſhers, or others, who cure them and pack them, either for home ſale or for exportation: this premium to be paid by the Commiſſioners of the Cuſtoms, upon producing a certificate upon oath, before a magiſtrate, miniſter, juſtice of peace, or a cuſtom houſe officer appointed for that purpoſe, at the different ports where fiſh are caught, certifying the number of barrels they have caught and ſold, as above, each ſeaſon: Likewiſe, That the boat-fiſhers be paid a premium of 2s. 6d. for every 120 green cod or ling, and 1s. for 120 green tuſk fiſh they bring to ſhore, and ſell as above, to be certified

as

as the former. Theſe premiums would encourage the poor boat-fiſhers, and increaſe their number to ſuch a degree as to render it eaſy, at any time, to man the greateſt part of the Britiſh fleet with ſtout and hardy ſeamen, upon very ſhort warning; the fiſheries thereby becoming a conſtant nurſery for breeding ſailors, beſides increaſing the quantities of fiſh at market.

8th, That, in every port in Scotland, where fiſh are entered for exportation, there ſhould be a man of prudence, judgment and ſkill, appointed to examine the curing and packing the fiſh, and to mark with a burning iron, upon every caſk, in capital figures and letters, the year, name of the owner, and the port from whence the fiſh are exported, if he finds them ſufficient; but, if they are not ſo, the owners to be ſeverely fined. Theſe men to be appointed to their offices by Government, with ſuitable and decent ſalaries to encourage them to do their duty, ſo as not to be in hazard of being led into temptation; but ſubject to be diſmiſſed from their office, if found taking any fees from the exporters.

The following is an exact account of the quantity of herrings caught, and of the bounties paid in Scotland, beſides what were paid in England, on the tonnage of veſſels, from 1750 to 1779, which ſhows the great ſums paid of bounties, for a ſmall quantity of fiſh caught in that time.

	Barrels.	Bounty paid. L.	s.	d.
From 1750 to 1760 -	1613	3459	16	0
From 1760 to 1770 -	102,886	143,020	17	10
From 1770 to 1779 -	188,159	109,069	12	8
Total	292,658	255,550	6	6

Theſe quantities of herrings were caught in twenty-nine years time, for which the foreſaid great ſums were paid on the tonnage of veſſels, amounting to above 17 s. 5½d. for every barrel; and neither the home nor foreign markets were any better or cheaper ſupplied than formerly.

9th, To prevent any future frauds, it will be proper, that a certificate be produced in a limited time, importing, that the fiſh exported are landed in the Weſt Indies, or other foreign ports; and payment of part of the bounties ſhould be delayed untill ſuch certificate is produced.

Laſtly, Agreeably to what Mr Knox recommends in his book on the Scots Fiſheries, if villages or ſmall towns were erected in the different places of the country where fiſh are caught, merchants and others would reſort to, and ſettle in them, and accommodate the fiſhers with habitations, and the various materials neceſſary for their uſe, by which means they would mutually ſerve each other, as well as the country; and if, at the ſame time, the landholders would build houſes, or feu out their grounds on moderate terms, it would encourage people

people to ſettle in them. But to promote this the more effectually, if Government would be pleaſed to contribute to it, in ſome ſuch manner as the wiſdom of Parliament may ſuggeſt, that would be the only ſure way to render the fiſhing permanent, and confirm it in all time-coming, as well as prevent any emigrations hereafter.

Thus has the writer of the foregoing pages, as conciſely as he could, humbly preſumed to offer his ſentiments on this intereſting ſubject. He is very ſenſible of his want of ability for the full diſcuſſion of a matter of ſuch vaſt importance; but he hopes for the indulgence of a candid public. By means of his intimacy with a gentleman, dead ſome years ago, who held an office at the Cuſtom-houſe General at Edinburgh, he had acceſs to know the exact quantities of fiſh caught during the periods referred to, and the ſums paid both for tonnage and exportation, bounties, &c. &c. He has only farther to mention, that the obſervations herein contained are the reſult of long experience, and many years inveſtigation; and being written ſolely with a view to the good of his country, he will be happy indeed, if any of them ſhall be thought worthy of notice, as anywiſe tending to promote the great ends preſently in contemplation by the Britiſh Parliament, and the Highland Societies of London and Edinburgh, reſpecting thoſe truly grand objects of national wealth, ſtrength and utility, *viz.* to prevent emigrations, the *improvement of the Britiſh Fiſheries, and the manning of his Majeſty's Navy with ſtout and hardy Seamen.*

AN

AN

ESSAY

ON THE

Scots Fiſheries,

Laid before the Highland Society of Edinburgh, in October 1785, by George Pitcarne, Captain of the City Guard of Edinburgh, for which they gave him a Gold Medal.

AN

ESSAY

ON THE

Scots Fidderies,

Read before the Highland Society of Edinburgh, in October 1785, by George Farcarse, Captain of the City Guard of Edinburgh, for which they gave him a Gold Medal.

AMOR PATRIAE.

TO THE HIGHLAND SOCIETY OF EDINBURGH:

AN ESSAY ON THE SCOTS FISHERIES.

THE Fiſhings on the Highland coaſts and iſlands of Scotland are immenſe; at preſent, they are much neglected; but if theſe are once properly underſtood, and ſeriouſly followed after, they will undoubtedly become not only a ſource of laſting riches to this kingdom at large, but a peculiar bleſſing to thoſe particular parts of the country where they ſhall be carried on.

The Gentlemen Landholders, or their factors, ſhould, at proper places and diſtances, annually lay up a ſtock of ſalt and caſks, with boats, nets, lines, and hooks; alſo ſome malt, oat meal, ſpirits, ſnuff, and tobacco, and other neceſſary proviſions; and ſhould make proper and reaſonable agreements with their tenants and fiſhers, (what they are to pay) for the neceſſary articles furniſhed to them; and to allow them a reaſonable price for all the fiſh they catch in the ſeaſon, in the manner that the landholders

landlords do in Shetland with their fiſhers, which would encourage the poor people to follow out the fiſhing when the fiſh are on the coaſt, or in the lochs or bays—as it very often happens, that, for want of theſe magazines of ſalt and caſks, after the fiſh are caught, they are loſt and thrown to the dunghill: whereas, if ſmall magazines of that ſort were provided at ſundry places, the fiſh would be preſerved, and both the landlords and the fiſhers would be gainers.

And to preſerve the caſks from ſpoiling, in caſe they are not all uſed every year, they ſhould be filled with ſalt or with water, until the fiſh are caught to pack in them, by which means, not only the Herring Fiſhing, but alſo the Cod and Ling Fiſhing, may be carried on to very great extent, of which there are likewiſe great plenty on all the Highland coaſts, and all the iſlands of Scotland, particularly the iſlands of Orkney and Shetland, and the iſland of Barra, and on moſt parts of the coaſts of the Weſtern Iſlands of Scotland, if they were properly ſought after. As an inſtance of which, the following anecdote is here inſerted:—A few years ago, the author was in Orkney, when a veſſel was lying, wind bound, in Elwick road, in the iſland of Shapinſhaw, in that country, the maſter of which dined one day at the miniſter's houſe of that pariſh, and invited the miniſter and the author to dinner with him next day on board of his veſſel, when he would give them fine freſh cod for dinner, which were not then caught; the miniſter, divertingly

ingly, ſaid, he ſhould not gut fiſh until he caught them; but the ſhipmaſter replied, he was ſure of them, as he had fed his crew, ever ſince he came there, with freſh cod, and would catch them within a *gun-ſhot* of where his veſſel lay: He was as good as his word, which ſurpriſed the miniſter very much, as he had never heard nor known of cod being caught there before. Many inſtances of this kind may be given from different places in Scotland, which is a proof of what may be done, if the people were encouraged, and *ſhown* the right way to ſeek after the fiſh where they may be caught.

Follows a Liſt of the number of veſſels or buſſes that were at the Herring Fiſhing from the year 1750, when the tonnage bounty was firſt appointed, to 1779, and the bounties paid them, with an account of the number of barrels of herrings caught in that time, which can be certified by the Cuſtom-houſe books.

The Year	Bounty *per* ton.	N° of veſſels	N° of barrels landed	Bounties paid.		
				L.	s.	d.
1750	30s *per* ton					
51	ditto	2	214	223	4	0
52	ditto	4	452	452	8	0
53	ditto	8	519	777	18	0
54	ditto	6	564	605	8	0
55	ditto	1	68	116	14	0
56	ditto	1	64	116	14	0
57	50s *per* ton	2	317	259	10	0
58	ditto	3	245	454	0	0
59	ditto	3	4	454	0	0
1760	ditto	13	3089	1386	17	6
61	ditto	17	4046	1863	17	6
62	ditto	49	12949	5140	15	0
63	ditto	87	3055	9228	17	0
64	ditto	119	8832	12828	0	10
65	ditto	157	39691	17640	0	0
66	ditto	161	21146	31190	0	0
67	ditto	163	28162	31390	0	0
68	ditto	202	15538	23882	10	0
69	ditto	85	17822	8470	0	0
1770	ditto	19	1878	2154	3	4
71	ditto	4	385	525	8	4
ditto	30s *per* ton	25	2447	1559	12	6
72	ditto	168	22237	11055	7	6
73	ditto	190	42055	12510	8	6
74	ditto	249	56593	17025	5	0
75	ditto	279	53284	19509	5	0
76	ditto	293	51669	21232	7	6
77	ditto	237	43016	17362	2	6
78	ditto	90	8662	6135	12	6
29		2637	438,975	L. 255,550	6	6

From

From the foregoing liſt it appears, there were 2637 veſſels at the Herring Fiſhing in 29 years time, who caught 438,975 barrels of herrings, which are called Sea Sticks, being packed at ſea, of which it takes 18 barrels to fill 12 barrels of proper packed herrings, when repacked at ſhore, which makes 292,650 barrels, fit either for home ſale, or for exportation, for which bounties were paid, amounting to L. 255,550 : 6 : 6, which is above 17s. for every barrel they caught, and is near their full value. Beſides theſe, the boat-fiſhers caught herrings at the ſame time, which greatly exceeded the above quantity; but as there were no records kept of what they did, it cannot be aſcertained: Altho' it is fact, that, from the great quantities uſed every year at home, by the tradeſmen and the country people, there were many more herrings made uſe of at home than what were exported; and *ſhows* us what great treaſure we have upon our coaſt, and what great wealth may be brought into the country, if the fiſhing were attended to in a proper manner.

It is well known, and has been certified by many reſpectable authors, that there has often been above two thouſand boats employed yearly upon the weſt coaſts of Scotland at the Herring Fiſhing; and when fiſh are on the coaſts, it is believed, there are ſtill ſeldom fewer than twelve hundred boats yearly at the fiſhing; but as the author cannot aſcertain it to be the caſe, yet he is well informed, there are ſtill that number, and each boat has generally from four to ſix men in it, which is a

certain

certain nurſery for breeding ſtout and hardy ſeamen for the navy, &c.

The general value of herrings runs from 20s. to 25s. *per* barrel, if they are good, and ſufficiently packed and cured. Salt and caſks may be got from the Friths of Forth or Clyde, or refined ſalt from Lord Dundonald's Salt-Works; but Spaniſh or foreign ſalt is reckoned ſtronger and better for curing herrings with, eſpecially if they are exported to warm countries, and in that caſe the duties of the ſalt are drawn back: But very great care ſhould be taken to cauſe all herrings be repacked with new pickle, after they come to ſhore; for they are packed at ſea in a great hurry, and done ſo *ſlightly*, that it takes three barrels to fill two barrels when properly repacked, by which means they are greatly improved, and will keep much longer, and may be carried to the Weſt Indies, or any other foreign market, and will ſell for much more money than they otherwiſe would do. This would keep up the character and credit of the country, as well as help to enrich it.

There is another branch of Fiſhing on many parts of the north and weſt coaſts of Scotland, which is very little known, and may be made very beneficial, although it is attended with ſome danger. There are great numbers of Seals or *Selchs* on all the north and weſt coaſts, and on ſome of the iſlands of Scotland, who frequent rocks at a diſtance from the land, and in ſeveral caves on the continent. If a premium was given for catching them,

them, that trade might be carried on to very great advantage, as the Oil made from them is the beſt in this country, and fit for many uſes: Beſides, their ſkins are very valuable when tanned, being a new branch of manufacture for making of ſhoes either for men or women, which are greatly eſteemed, and which ſhould be encouraged and taken notice of by the Legiſlature. The ſeaſon for catching them is in the month of October, or about the firſt of November, which makes it dangerous, as the weather is ready to break about that time of the year: But with ſtout boats, or rather ſmall decked veſſels well manned, that trade may be carried on with very great ſucceſs: As the Author has ſeen from 500 to 1000 ſeals caught in little more than 48 hours time, from a rock that lies about eight leagues to the weſtward of Hoymouth in Orkney, where there are great numbers of them, and in many other places thereabout.

The Society, at the ſame time, ſhould uſe their influence with Members of Parliament, Noblemen and Gentlemen, who have the good of their country at heart, to get the bounty on fiſh augmented when exported, as the preſent bounties are by far too ſmall, being only 2 s. 8 d. for a barrel of herrings, and 3 s. for every 100 weight or quintal of dried cod or ling; and to get men of probity and ſkill appointed at every port in Scotland, from whence fiſh are or may be exported, to examine them before they are ſhipped, and to mark with a burning iron each caſk, the year, name of the owner, and the

the port they are ſent from, if he finds them good and ſufficient,—if not, the owner to be fined. This will prevent fraud, and keep up the reputation and credit of the country.

All of which the Author humbly begs leave to offer as his advice to the Society, and to get the Truſtees, or rather more properly Parliament, to grant bounties or premiums for eſtabliſhing the fiſheries in ſuch a manner as will confirm them in all time-coming; which will be an inexhauſtible treaſure to the kingdom, and a certain way of improving the Highlands and iſlands of Scotland, in a very extraordinary manner: This will prevent emigrations; and, in a few years, it will make the country and the people in it reſpectable. As they are generally very ſober, careful, and induſtrious, they only want encouragement, and people to ſhow them to do things in a proper way, being naturally tractable and willing to do well, if you take the right method with them; they may be eaſily led, but not driven.

Laſtly, If the landholders will build houſes, or ſmall villages in proper places and diſtances, where fiſh are or may be caught, traders and adventurers will reſort to and ſettle in them, and will accommodate the fiſhers with habitations, and the different materials neceſſary for them; by which they will mutually ſerve each other, as well as the country: And theſe traders will find it their intereſt in providing ſalt and caſks, &c. at thoſe places, when they find a ready market for them, which will be of great uſe

to

to the country,—and in a very few years will make it much more populous than ever it was, and corroborate what is ſaid in the two following lines of Allan Ramſay's Poems:

No nation in the world can parallel,
The plenteous produce of our happy Iſle.

COPY

COPY of a LETTER ſent to the Right Hon. the EARL of BREADALBANE, as Vice Preſident of the Highland Society of London, March 27th 1787.

MY LORD,

IN the Edinburgh Caledonian Mercury of 22d February laſt, I obſerved an advertiſement, deſiring every perſon who has any local knowledge of proper places for promoting the Fiſheries upon any parts of the Weſt, North, or Eaſt Coaſt of Scotland, to inform your Lordſhip thereof, as Vice Preſident of the Highland Society of London.

I therefore beg leave to offer your Lordſhip and the Society my ſmall and humble opinion of ſome places where I have known ſeveral years ago white fiſhing of different kinds carried on to great advantage, ſuch as Cod, Ling, Tuſk, Haddocks, Seath, Skate, and Turbot, and may ſtill be done, if the inhabitants were encouraged, by giving them ſome boats, lines, nets, &c. or rather premiums, as the Society or Parliament ſhall think proper:—For example, If they will be pleaſed to cauſe all the fiſhing boats in every pariſh or iſland every ſeaſon to be numbered; and according to the number of men, and quantity of lines or nets each boat carries, to give each boat a premium from L. 5 to L. 10 ſterling yearly; this would effectually eſtabliſh the fiſhing for ever. The

places

places where I know thoſe fiſh are, and may be caught, are in moſt or all of the iſlands of Orkney and Shetland, and in the iſland of Barra, and moſt of the Weſtern Iſlands of Scotland, alſo in the friths of Forth and Murray. If ſuch premiums are given for a few years, there will be great plenty of fine freſh white fiſh, as well as herrings, got all ſeaſons in moſt of the public places in Scotland, both good and cheap.

I hope your Lordſhip will excuſe this freedom; but my anxiety for promoting the fiſhing makes me preſume to offer my poor opinion on the ſubject: And I am, with great reſpect,

My Lord,

Your Lordſhip's moſt obedient humble ſervant,

GEO. PITCARNE.

THE following Letters the Author of this Pamphlet has read with great attention and pleaſure; he is of opinion it would be a great loſs to the Public were they not reprinted. They appeared only in the Edinburgh Evening Courant, and may have been ſeen but by a few; and as News-papers, when once read, are generally thrown aſide, and ſeldom, if ever, peruſed again, for this reaſon he has annexed them, not only for preſervation and the honour of their Author, but the inſtruction of the Public at large: They contain moſt valuable and uſeful directions, which may prove the ſource of many improvements in future ages.

LETTER I.

For the Edinburgh Evening Courant.

SIR, *Auguſt* 9. 1786.

IT muſt give peculiar pleaſure to learn from a paragraph in your paper lately, that the bill for the encouragement of the Fiſheries, lately paſſed, preſently has raiſed ſuch a ſpirit of preparation for proſecuting them, at ſundry places upon the Weſt Coaſt: Your correſpondent further remarks, " That if theſe induſtrious people are ' ſupported, by a reaſonable encouragement to the ' Fiſheries upon a ſenſible practicable plan, free of ſpe- ' culative ſchemes, the happieſt conſequences will ſoon ' follow, not only to the Weſt Coaſt, but to the nation ' at large," &c.

I know nothing of the principles of the bill; but as ſo much pains has been beſtowed by many very able gentlemen, I will ſuppoſe it to be as complete, as a tender delicacy, and a deference to the opinions and even prejudices of our practical fiſhers of theſe times, will admit of: If it recommends, without too rigidly enforcing (until inſtructors are obtained for introducing improvements) an alteration in the preſent ſyſtem of operations, it would be well; but even this would not pleaſe.

For

For it is obſervable, that, in all ages, there ever has been a keen averſion or ſullen obſtinacy diſplayed at every attempt towards improvement or reformation, even where the practices are known to be ineffectual or bad: The generality of mankind (profeſſional men in every ſtation in particular) ſpurn at the idea of being thought leſs able, or to ſtand in need of inſtruction from their neighbour; and therefore they adhere ſo cloſely to what their minds have been familiariſed to, that it is not without the keeneſt ſtruggle, and after the plaineſt conviction, they can allow themſelves to be undeceived.

Had theſe principles univerſally prevailed, without the admiſſion of *ſpeculative ſchemes*, or attending to the firſt eſſays of genius, the world had yet remained in a ſtate of ſavage wild barbarity, and we had known nothing of thoſe elegant and uſeful inventions and improvements in arts, ſciences, and manufactures, that have, by the labours of the human mind, been brought to a ſtate that forms the glory of the preſent age; and is almoſt daily acquiring ſuch new acceſſions from the exertions of genius, in conſequence of the generous attention in general paid to it, that it promiſes to future ages acquiſitions as far tranſcending thoſe of the preſent times as they do the former, unleſs ſome great convulſion in the ſtate of nature or of nations intervene to mar the fair proſpect.

Perhaps no branch of buſineſs ever ſtood in more need of improvement than does that of our Scots Fiſheries. This is a ſentiment I know will give offence to many; but,

but, were it not founded on truth, the public had not been amuſed with ſo many *ſpeculative ſchemes* as they have ſeen of late; for it would otherwiſe have been upon ſo good a footing, as to have precluded their neceſſity, conſequently they never would have appeared.

An inquiry into their preſent practice, and for many years bypaſt ſucceſs, exhibits ſuch a very mortifying ſcene of bungling and blunder, diſappointment and loſs, as cannot fail to have leſſened us in the eſtimation of European nations, conſidering it is ſo well known that we poſſeſs the moſt commodious and advantageous ſituations in the world for that purpoſe, that ought to give us the ſuperiority of all others, and, if properly occupied, certainly would enable us, not only to produce fiſh of the beſt quality, and in the fineſt condition, but to underſell all other nations at moſt markets.

Notwithſtanding which, and the very conſiderable ſums of money that have been generouſly beſtowed by Government in bounties for theſe good many years bypaſt, we have been very unable to ſupply our own markets for home and colony conſumpt, beſides furniſhing a ſurplus to our neighbours, as we certainly ought, and that to a great amount, entirely owing to the improper manner the buſineſs is conducted in, by boat-fiſhing, which method only is practiſed, both in cod and herring fiſhing, round all our coaſt. It is admitted, that, when the fiſh happen to ſet into the lochs, or cloſe to the land, much may

may be done by boats; but the uncertainty of this is far too conſpicuous indeed.

The conſequence thereof is, that the generality of prudent cautious people, who are not at the trouble to inveſtigate the true cauſe of our failure, are diſguſted at the trade, and ſuppoſe it untenable, chiefly attributing our diſappointments as the fault of our ſeamen, whereas the blame lies entirely at the doors of the proprietors of our fiſhing adventures, in not procuring fit inſtructors, and properly equipping their veſſels; for were this done, and our people once put into a proper line, it will hardly be doubted but they are as good and hardy men to brave the dangers of the ſea, and as fit to conduct any enterpriſe, where honour or intereſt is to be acquired, as any other people whatever.

A peruſal of Mr Knox's View of the Britiſh Empire will ſhew him to be the warm friend and able advocate of his country: He has been at much pains to aſcertain the produce of our captures, and extent of exports, for a ſeries of years; and no better evidence need be adduced to corroborate what is ſaid; and it ſhews, that an average of the laſt ſeven years has juſt yielded half cargoes to the bounty veſſels.

I have lately ſeen a gentleman from Stornoway in Lewis, who informed me there were twenty-one veſſels rendezvouſed there laſt year on the bounty fiſhing.—Theſe, after three months fruitleſs ſearch, ſhifting from one

one loch to another, as uſual, hardly procured among the whole a ſufficient quantity of herrings to make a cargo to one of the ſmalleſt of them; and yet the commanders of theſe veſſels, I have reaſon to ſuppoſe, are not inferior, and, to my certain knowledge, ſeveral of them, with whom I have converſed, are equal in good ſenſe, ſpirit, and ability, to any that uſe the trade; and as they reſide near the fiſhing ground, have had an opportunity, and would undoubtedly exert themſelves as much as their neighbours.

At Staxigo, too, on the coaſt of Caithneſs, in the Moray frith, there were fifty or ſixty boats employed to fiſh for herrings this laſt ſeaſon, and they had no ſucceſs at all: A gentleman from Aberdeen, who was intereſted in the hire of a part of them, and who very juſtly attributed their want of ſucceſs to the boats not going far enough out to ſea (which they dare not do, on account of the rapid tideway that runs there,) went out with them ſeveral nights himſelf; yet, although by his perſuaſion they went farther than uſual, it was not far enough, for they did nothing, farther than having the mortification to ſee ſeveral Dutch veſſels buſily employed, who, he afterwards learnt by coaſting veſſels that had paſſed and ſpoke with them, were fiſhing very ſucceſsfully, and made their full cargoes in the courſe of betwixt two and three weeks, juſt within a few miles of where our people ſpent the ſeaſon, toiling to no purpoſe. Similar inſtances to this, that might be mentioned, are numberleſs; theſe are only condeſcended upon, as moſt recent.

I have alſo converſed with a ſeaman from Oſtend, who was in our ſeas laſt ſeaſon at the herring fiſhing; he aſſured me, that one morning, a few leagues to the north-eaſt of the Buchanneſs, they had above 120 barrels in one haul of their nets; about 100 barrels of which they got cured in good condition, the reſt was thrown overboard; whereupon they got from another veſſel in company, belonging to the ſame owners, ſufficient, with what they had before, to complete their cargo, and went directly home.

Theſe failures on our ſide, and the ſucceſs on that of foreigners, are as certain and regular as the ſeaſons return; and it is well known that the Dutch in general make from two to three cargoes each ſeaſon, whereby they are conſiderable profiters by the trade, without any bounty whatever, but the fruits of their induſtry, altho' they have a pretty long voyage out and home; while we, with the fiſh ſwarming at our doors, can hardly make the half of one ſingle cargo, and even with a conſiderable bounty are frequent loſers.

Does not a knowledge of theſe things point out the *neceſſity*, and call upon the good ſenſe of the nation, for an alteration in our too long perſevered-in abſurd ſyſtem? or, is it by fate decreed, that we ſhall for ever bungle on in the old track, continuing to render ourſelves ridiculous in the eyes of Europe, and perpetuating a ſad reflection on the induſtry of a people, otherwiſe famed for that virtue

virtue all the world over? I hope not, for the ſake of honour, as well as intereſt.

I ſuppoſe there can be no juſt cauſe of fear that Parliament has introduced any thing into the bill that can be literally termed *ſpeculative*: I apprehend, what is chiefly alluded to in that phraſe, is a fear for the bounty veſſels being obliged to fiſh in the Dutch manner by the buſs-rope; a practice that is ſo far from being new, or deſerving the appellation of *ſpeculative*, that our own anceſtors practiſed it, with much ſucceſs, ſeveral hundred years ago, (for the truth of which, ſee *Intereſt of Scotland conſidered*), who it is very probable taught the Dutch, and they have invariably practiſed it to this day.

And I will venture to aver, that, until we return again to this our own old practice, never will this branch of buſineſs be brought to form an important national ſtaple, or a regular profitable private one; both which it well may, and, I hope, will ſoon be made. Impreſſed as I am with theſe ideas, it is impoſſible to reflect without pain upon the great averſion ſhown by our practical fiſhers to this method, ſo diametrically oppoſite to their own and country's intereſt.

I do not by any means want, and hope I ſhall not be underſtood, as wiſhing to recommend putting a hardſhip upon any one, by forcing this practice upon them, as it would then perhaps be thought, and would much rather like to ſee people gradually led to it, by a proper ex-

ample being ſet them, when its advantages will recommend it, and, I am morally certain, it would ſoon come into general uſe.

Although the Dutch have long carried on the trade to great purpoſe indeed, I will not admit that they have arrived at the utmoſt point of perfection it may be poſſible to carry it. Therefore I would not implicitly follow their practice in all things, becauſe our ſituation is ſo much in our favour, that we can carry it on with much leſs expence, not only in the value of our veſſels, but of ſundry things elſe. However, I would cull and ſelect from theirs, as I would from every other country, in helping to complete a good ſyſtem; nor, in doing this, ſhould even ſpeculative ſchemes be rejected altogether, when they appear to be founded on reaſon, without inveſtigating their merits, or trying their effects.

But the formation of ſuch a ſyſtem is rather too much for a private perſon; it is therefore to be regreted, that Government will not do ſomething this way, for the public may be aſſured it is a meaſure abſolutely neceſſary to be done, to aſcertain the true value of our fiſheries, and put them upon any thing like a good footing. If they will not, to whom can the people of Scotland with more propriety look up than to the gentlemen of landed property. May I hope to be excuſed for preſuming to ſuggeſt a hint to the Members of the Highland Societies of London and Edinburgh, &c. who, actuated by a true regard to the intereſts of their country, are now forming themſelves

themſelves into a Joint Stock Company, for the laudable, generous, and patriotic purpoſe of raiſing funds for erecting the intended villages, &c. &c. in the Highlands and Iſlands, to take this into their ſerious conſideration, and employ a part of their ſtock in that way.

Or, if it be incompatible with the rules they have laid down to themſelves, to proſecute the fiſheries on the Company's account, that ſome of the individuals of it, or others, form themſelves into a ſeparate company, under the firm of *Highland Society Caledonian Fiſhing Company*, or any other they think proper, to do this upon proper principles of decked veſſels, uſing their nets by the buſsrope.

Theſe two Companies may mutually aſſiſt and ſupport each other for a few years (when, it may be depended upon, that the plan will be found profitable, and followed out by many hands), the one by beginning to build villages in the moſt centrical ſituations for the fiſhery, the other by furniſhing inhabitants to theſe villages, who being in permanent employ, and upon certain wages, will be able to pay a reaſonable rent, if the houſes are built upon moderate terms.

The good that may reſult to the public from the execution of this plan may be immenſe; for ſuch a company can better afford the expence of procuring able inſtructors for improving our fiſheries than private individuals can; and a little practice in their employ will breed a parcel

of

of capable fiſhers, from among whom private adventurers may be furniſhed with men fit to be entruſted in the execution of fiſhing ſchemes; and thus the general intereſt will be promoted in a ſingular manner. For then ſhall we produce, from among the hardy ſons of Caledonia, perhaps the beſt fiſhers in Europe, as we have done before. For I will not allow myſelf to doubt, but that, in the courſe of a few years, we ſhall as much excel the Dutch at cod and herring fiſhing, as we now do in whale fiſhing.

As the nation has before now been bubbled by a fiſhing company, wherein a conſiderable capital was almoſt totally ſunk, perhaps many will ſuppoſe it impoſſible to carry on the buſineſs to any good account by a company again. Many inſtances could be condeſcended upon to prove, that company matters are and may be conducted with much propriety, and œconomy too, if people of integrity are employed in the charge. However, to obviate the objection, I would beg leave to recommend, that this plan (if at all) be at firſt taken up upon a prudent, cautious, and ſmall ſcale, with a few veſſels only, until its utility and profitableneſs point out the propriety of extending it, which may then be done by degrees, at leſs expence, and to better purpoſe in every reſpect, as knowledge is acquired from experience.

If this is done, the writer hereof pledges himſelf to prove, that it will as effectually promote and ſteadily ſupport

port the intereſt of the intended villages, and that of the individuals in the company's or other adventurers employ that may be reſident therein, (and they may ſoon be very numerous,) as the intereſt of thoſe to whom boats may be given, ſhould that generous propoſal ever take place. It will alſo greatly add to the commerce, proſperity, and ſtrength of the nation at large, by laying a ſolid founda tion for breeding, in continual ſucceſſion, a race of thorough-bred fiſhers, as well as the hardieſt and beſt of ſeamen.

If you, Sir, ſhall think this worthy of a place in your paper, I will purſue the ſubject through the courſe of a few letters, and, with all due ſubmiſſion and deference to ſuperior abilities, preſume to give a few hints as the out-lines of a plan for putting this in execution, upon what appears to me the moſt prudential and leaſt expenſive principles; but, as this is a pretty long one already, I ſhall for the preſent conclude, Sir, your's, &c.

C. F.

LETTER II.

SIR,

I SHALL now proceed to give the outlines of a plan for proſecuting the fiſheries upon what appears to me the moſt prudential and leaſt expenſive principles. I will beg leave to do this, or at leaſt attempt it, in ſuch a way as may ſerve the purpoſe of being experimental and inſtructive, and thereby lead to the reformation of our operations, and the introduction of a new ſyſtem.

I am well aware, that I have undertaken a taſk that lays me open to be cavilled at, and perhaps cenſured for preſumption; however, I will endeavour to implement the promiſe to the beſt of my abilities: Promiſing, that it is only given as hints to be improved upon, by thoſe of greater judgment, to whom, and the teſt of reaſon, they are thus humbly ſubmitted to public conſideration.

Having nothing in view but the good of my country; and as it is impoſſible for human prudence to deviſe a ſcheme altogether unexceptionable, I will conſole myſelf with a hope for the indulgence of the candid and liberal-minded to the imperfections that muſt unavoidably be conſpicuous in the execution of this plan. For "none can "accompliſh more than they intend." I wiſh I could equal mine.

Suppoſe there were from nine to ten thouſand pounds ſubſcribed for this very important national purpoſe, I will

will endeavour to ſhow, that ten veſſels may be built, and more or leſs in proportion to any given ſum, an ample ſtock of nets, lines and other apparatus, with all other kinds of materials and ſtores requiſite for ſuch an undertaking, and reſerve a conſiderable part of the capital unappropriated to anſwer emergencies, until, as is formerly ſaid, the profits and utility of the ſcheme ſhow the propriety of extending it. In doing this, it will be neceſſary to divide the ſubject into ſeparate heads.

1. Of the ſize, conſtruction, and value of veſſels fit for the trade.

2. Of the quantity and manufacture of nets and lines requiſite.

3. Of caſks, ſalt, fiſh curing, &c.

4. Of fiſhing for herrings, cod, &c. &c. combined with various other matters relative thereto.

Of Veſſels fit for the Fiſheries.

THERE have been very various ſentiments delivered upon this ſubject of late; ſeveral, whoſe names are very reſpectable, having declared, that the largeſt veſſels, ſuch as the Dutch uſe in the trade, are beſt, and only fit for our imitation, both in rigging and conſtruction of the hull. From this opinion I muſt beg leave to diſſent, being fully convinced that much ſmaller ones are ſufficient for our purpoſe;

purpoſe; and this conſtitutes one of our greateſt advantages over that people; whereby the buſineſs can be carried on equally well by us in veſſels of one-fourth part the value of theirs, conſequently at ſo much leſs advance of capital, leſs riſk of loſs, and leſs expence of tear and wear.

There is reaſon to ſuppoſe, that, if the Dutch could have obtained a ſettlement in any of the Iſles of, or upon the continent of Scotland, as tradition ſays they much wanted, their ſyſtem of operations, as well as the ſize of their fiſhing veſſels, had been different from what they are. Their great diſtance from the fiſhing ground lays them under the neceſſity of uſing large ones for two reaſons:

1ſt, As they cannot expect to make many voyages in the prime of the ſeaſon, they muſt be able to carry a cargo worth while, leſt they be not able to regain a proper ſtation to fall in with the ſhoals of herrings again, while they are in good condition; and 2d, As they cannot go on ſhore near the fiſhing ground to barrel and pack their fiſh, that proceſs muſt be done on board, and for which large veſſels are fitteſt.

I have maturely conſidered the Dutch buſs and dogger, the Flemiſh and Yarmouth luggers, as well as the ſmack and wherry rig, and have converſed with people ſo highly prejudiced in favour of each, as to declare that which they happened to be accuſtomed to was only fit or beſt

beſt for fiſhing. From which I am led to conclude, that any of theſe, or indeed any other, under judicious management, are perfectly competent; but that thoſe who, in the ſea phraſe, are leaſt *wind taught*, or upon whoſe rigging the wind has leaſt impreſſion, is fitteſt of all, as they will drive leaſt, and ride eaſieſt at either anchor or nets, and juſt ſuch as our anceſtors uſed ſome hundred years ago.

Although I am neither ſeaman nor ſhip carpenter, I will try to deſcribe what meets my ideas as fit to proſecute every branch of the fiſheries, particularly in the Highlands, among the iſlands and lochs, and what I would beg leave to call a *Caledonian Fiſhing Boat or Galley*.

She ought to be fit to lie near the wind, and ſail well, ſo as ſhe could readily clear a lee ſhore, make quick paſſages out and home, and prevent the crew from being intimidated to proſecute fiſhing, either in the open ocean, in the narrow channels among the iſlands, or in the lochs, wherever there was a proſpect of ſucceſs; therefore ſhe ſhould not be large and weighty, ſuch as the Dutch ones are, but quite the reverſe.

Suppoſe the hull to be of burthen from twenty to thirty tons, rather longer than the common conſtruction, tolerably ſharp under water, that ſhe may go well, but thrown out full above, that ſhe may fall lightly in a hollow ſea, as well as ride eaſy, and at ſame time have a roomy

deck, deep waiſted, from two to two and a half feet the whole length, to give ſhelter to the men, built either of carvel or clink work, rather light than ſtrong, for the convenience of rowing and ſailing well.

The principal part of the hold to be divided by three ſtout bulk-heads acroſs; theſe again divided by two others, running fore and aft, making ſix diviſions, which, with the cieling within them, are to be caulked quite tight. Theſe cloſe apartments are for the reception of fiſh in bulk; and in them, when tight, I will venture to ſay, that they may be as effectually pined or ſalted, and preſerved in as thorough ſafety as in the beſt vats or cloſe caſks, until they are landed to be packed in barrels. The reſt of the hold to be divided to the beſt advantage for ſtowing the men, proviſions, and fiſhing ſtores.

Such veſſel, although built light, will be ſo completely bound and ſtiffened by theſe bulk-heads, that it will ſtrengthen her greatly; and as fiſhing ones are for the greateſt part of their time in little elſe than ballaſt trim, may be quite competent for the trade, particularly in the Highlands, where they will be much afloat in the deep water loch harbours.

The rigging of her to conſiſt of a pretty large lug ſail, in the Flemiſh manner, rather ſquare or broad in proportion than of too much hoiſt; the principal or main maſt to ſtrike, having a middling long maſt head, or fit cranns for ſetting up a topmaſt, upon which a topſail may

may be hoiſted; a ſmall ſpar, placed forward at the inſide of the ſtem, as a foremaſt, on which a ſmall lug foreſail is to be ſet, with a ſmall light ſpar, to be occaſionally uſed for ſetting a ſmall mizen ſail upon, placed pretty far aft.

Theſe ſmall maſts require neither ſhrouds nor ſtays; the main maſt needs a good ſtout ſtay, but no other ſhrouds than a ſingle one in each ſide, ſtanding much aft, fitted with and taghted by a tackle, the lowermoſt blocks of which having hooks, for hooking into eyebolts or ſtraps: The main haulyard being always hooked to windward, forms an additional ſtay. I ſuppoſe it is hardly poſſible to deviſe any rig that is ſimpler or lighter than this, that can be furniſhed cheaper, or is better adapted to fiſhing operations.

It is allowed that this rig requires more hands to work them than the common ſloop one, conſequently is not ſo handy for coaſting; On that account, I had contrived, what I think an improvement for ſhifting the lug eaſily; but as what is meant to be ſaid of them here relates to fiſhing, for which only they are recommended, and as a fiſhing crew is quite competent to work them in all emergencies, in the way they are uſually fitted, ſhall ſpare the deſcription.

One of the principal reaſons for recommending a light conſtruction, both in hull and rig, is, that they may be rowed with oars occaſionally, as is before ſaid.

But

But, at ſame time, well knowing that a proper number of common oars, or rather ſweeps, as they are called, when large enough for ſuch a purpoſe, muſt be cumberſome on board a ſmall veſſel, that ſhould be clear of every thing but what is abſolutely neceſſary for fiſhing, my fancy went to work to contrive ſuch as would be moſt powerful in effect, and at the ſame time ſtow in the leaſt room. In this alſo I think I have ſucceeded; but as the deſcription would be tedious, ſhall defer it at preſent: If it ſhall be required, or found neceſſary, it will be done afterwards.

Theſe ſmall veſſels, when fitted in the manner I have attempted to deſcribe, will, I preſume to hope, be found ſingularly convenient for the fiſheries. In the firſt place, they will make excellent ſea boats, in which men accuſtomed to the ſea will not be afraid to venture out, and remain in almoſt any weather that other veſſels can keep it: In paſſing through narrow fairways, or round head lands, they will be found very fit; for, by uſing a few of their oars, they will clear lee ſhores, that no others, not having theſame convenience, could do.

In driving over fiſhing ground, they will be as fit or fitter than moſt others to recover it; for when wind fails, they can row. So that in the cod fiſhery, none, not even the wherry, is better adapted. In working the long line, more or leſs ſail can be uſed, as may be needed; and when there is not wind to work the veſſels with ſails, the lines can be either ſhot, or hauled by the oars.

In

In the herring fiſhing, among many other conveniencies, they will have this, that they will be as fit to work a fleet of nets of four or five hundred fathoms long as any other, and that either in the open ſea, or in the lochs; for they can ſhoot the nets by the oars, when there is not proper room or wind to work the ſails, juſt as well or better than in a boat.

When the main maſt is ſtruck, laid fore and aft, ſupported by crutches for the purpoſe, at proper height to give head room, and the main ſail ſpread over, it will form an excellent awning, keeping the deck comfortably warm in cold weather, whereon people can perform the work of gutting and rolling the herrings in ſalt, preparatory to their being depoſited in the diviſions of the hold, much handier than when expoſed upon an open deck. If, on the other hand, the weather is warm, this awning will keep the deck commodiouſly cool, and preſerve the fiſh from being injured by the heat of the ſun.

That fiſh of all kinds, when put into theſe cloſe apartments of the hold, with a proper quantity of ſalt, can be preſerved for ſeveral or even many days, until they be conveniently landed, is too conſiſtent with reaſon to entertain a doubt. The only objection that can occur is a ſuppoſition that the jabbling of the pickle, when the ſalt is diſſolved, might retard the veſſel's way, or otherwiſe prove inconvenient. To do away any fear of the firſt, it is to be obſerved, that well ſmacks, which always have a body of water within them, go as well as any others.

However,

However, in very rough weather, part of the pickle might be taken off, at holes properly placed, and fitted with ſpigot and foſſets, or good plugs, and put into caſks, to be returned upon the fiſh when the weather abates. If foreign ſalt is uſed, it does not ſo ſoon diſſolve as Britiſh.

This method of ſtowing and ſalting fiſh in the hold will not only ſave the crew a great deal of trouble and labour, that otherwiſe would be neceſſary in packing them in barrels, but alſo ſave much waſte of hoops, and damage done the caſks in their tops and chimes, by frequent upheadings, which operations can be much handier done on ſhore.

When or if ever the fiſheries are carried on in the open ſea with decked veſſels, not very diſtant from where they can run to land their fiſh to get caſks for them, or have them depoſited, where they can be kept in a ſtate of preſervation, inſtead of half cargoes that are preſently procured, in the courſe of three months or upwards plouſtering in the lochs, it is more than probable, that it may and undoubtedly will frequently happen, that they will make one, two, or even more full cargoes, of from ten to fifteen laſts in a week, and the quantity in a ſeaſon may be immenſe.

Theſe veſſels will command many other advantages that may perhaps be mentioned in the continuation of this ſubject, but, above all elſe, that they can be furniſh-

ed

ed cheaper than any other kind I know of. I have lately communed with an intelligent ſhip-carpenter, who offered to contract or oblige himſelf, upon being furniſhed with materials, to build the hull of ſuch a one as deſcribed, of thirty tons, carpenters meaſure; the expence of which ſhould not exceed L. 80 Sterling, completely finiſhed.

I am convinced, that furniſhing ſails, anchors, cables, and every thing elſe, neceſſary to complete the equipment and fit the rigging, might be within, but would not exceed L. 60 more; however, to extend the calculation ten pounds farther upon the whole, brings her to L. 150 Sterling, which, I have reaſon to think, is much beyond what it may be done for, yet is no great ſum; as, at this rate, four ſuch veſſels can be ſent to ſea, completely fitted for the buſineſs, at the uſual rate of one ſloop or ſmack of ſixty or ſeventy tons burden, whereby the chance of ſucceſs is increaſed four-fold on the ſame advance of capital.

And, inſtead of giving a few months work to twelve or fourteen hands in the uſual way, will give permanent employ to thirty-ſix or forty men and boys the whole year round; for theſe are meant to be appropriated ſolely, and ſhould be conſtantly employed in it, as far as wind and weather will permit, and the produce of their labours exported in larger veſſels.

If it ſhould happen that maſter builders will not readily agree to furniſh the hulls of ſuch veſſels completely finiſhed,

finiſhed, in the manner deſcribed, for the ſum mentioned, were the meaſure to be adopted, a man ſhall be pointed out who has capacity, and perhaps will do them for leſs money, upon furniſhing him with the neceſſary materials, by which means the work could be depended upon to be completely and ſubſtantially done; for there would be no temptation to put in a bit of wood, but what is found by nature fitting for the intended purpoſe, and quite clear of ſapſpill or ſoft wood, which can add no ſtrength, but, on the contrary, is a nuiſance, as it ſoaks in and lodges water, that increaſes dead weight, and contributes to the decay of other wood.

If the obſervation is allowed to be juſt, that the country who can carry on its manufactures, or other branches of trade, with the ſmalleſt capital, and at the leaſt expence, will have the advantage of, and be able to underſell all others, this then, I fondly hope, will certainly be the caſe with Scotland, when we aſſume ſpirit to proſecute our fiſheries upon proper principles, in the way moſt ſuitable to our ſingularly advantageous ſituation. As a ſmall help to the accompliſhment of ſuch a deſireable object, the foregoing is humbly ſuggeſted as part of the intended plan.

Now ten ſuch veſſels will occupy L. 1500 of the ſuppoſed capital. And I ſhall endeavour to aſcertain, or at leaſt give a gueſs at the value of nets and lines that may be requiſite to form a ſufficient complement for theſe.

Herring

Herring nets are made of ſuch various lengths and breadths, as well as of twine of different ſize and value, as muſt puzzle people who turn their attention to the ſubject at firſt, and that not a little.

For inſtance, a Yarmouth net conſiſts of four pieces, called deepings, of twenty-one yards long, and fifty-two inch meſhes broad, laced together ſideways, making about eleven yards breadth or depth.

At Greenock, Campbeltown, and in Bute, a net conſiſts of four pieces alſo, of the ſame breadth, but only twelve yards long, and various in ſize of meſh, from leſs than two to two and one-half inches, but the greateſt part two inches.

At Dunbar, it appears from Mr Fall's report to the Committee of the Honourable Houſe of Commons on Fiſheries, their nets are forty-five yards long, whether made in deepings or not is not ſaid; but as they are only ten yards deep, although called eighteen ſcore, I ſuppoſe they are only 180 meſhes, as that, at two inches, correſponds exactly to ten yards; this apparent difference is perhaps owing to its being a practice there to count every knot in the warp, whereas it requires two to each meſh.

In the Moray Frith, in the neighbourhood of Fort George, they are not ſo regular in their ſize, either in length or depth; and they are wrought with the ſingle inſtead of the double knot—a very exceptionable practice

 indeed,

indeed, that renders them liable to pucker when any thing catches hold of them, when the knots run, and they become uſeleſs.

Now, to ſtrike a criterion whereon to form a calculation, it is neceſſary to aſcertain the ſquare contents of yards in each of theſe nets; previous to which, it is to be obſerved, that what is called a two-inch meſh meaſures this only when drawn angle-ways; for it is but one inch betwixt each knot when ſquare. Therefore, in the meaſurement of nets, they are ſuppoſed to be drawn to the fulleſt ſtretch they can bear, both in length and breadth.

At Yarmouth, they are invariably wrought of a two inch meſh; now 200 meſhes of two inches gives 400 inches; this divided by 36, the number in a yard, gives 11 the depth; this again multiplied by 21 yards, the length, gives 231 ſquare yards in the net. The price paid for netting there, I am credibly informed, is 10 d. per ſcore, or a halfpenny per yard, (in caſes of hurry or demand, perhaps a little more), conſequently working this net will coſt nine ſhillings and ſeven pence halfpenny. If the purchaſe price is one pound eleven ſhillings and ſixpence, as it is ſaid to be, there muſt lie one pound one ſhilling and ten pence upon what they call the lint or twine, the price of which laſt year was four pound five ſhillings per cwt. or 9 d. per lib.; therefore the net muſt weigh 29 libs.

A Dunbar net, being 45 yards long by 10 broad, is 450 ſquare yards, and is 12 yards leſs than two Yarmouth ones; notwithſtanding which it is valued at L. 4. This is about 30 per cent. more than the price of them, and is partly on the twine, which, at Dunbar, is 11 d. per lib. being 2 d. more than the other, and on the working, which is rated at 7 d. the yard long by ten yards broad, this would only coſt 5 d. at Yarmouth; which is ſomething ſingular, conſidering labour in general is much cheaper in Scotland than in England; and it is particularly ſo of this branch in the weſt, or wherever it is practiſed in it.

A Bute or Campbelton net, of 12 yards long, and 200 two-inch meſhes is 11 yards deep, and contains 132 ſquare yards; this, at the Yarmouth price of netting, would coſt 5 s. 6 d. inſtead of which, I have reaſon to think, it can be, and is done for 3 s. 4 d. or even under, which is 60 per cent. lower, and above 110 per cent. under the Dunbar rate. They are made of very fine ſmall twine, and weigh from five to five and a half or ſix pound the net. Our fiſhers eſteem nets the more as they are fine; they find theſe anſwer beſt in ſmooth water loch fiſhing, but they would have no duration in deep ſea fiſhing; for which pretty rough weather is found moſt favourable for the fiſh ſtriking in the nets; in which, with a weight of fiſh in them, theſe fine ones would ſoon go to pieces.

As I wiſhed to acquire ſome knowledge of the manufacture of nets, I purchaſed rough hemp, and made betwixt

twixt three and four thouſand ſquare yards, had it dreſſed, ſpun, twiſted, netted, joined into nets, barked, and mounted completely in the Dutch manner, under my eye, and partly with my own hand; in the mounting I had the aſſiſtance of a Fleming from Oſtend, one of the moſt intelligent fiſhers I ever converſed with, and I have with many.

I found hemp yarn, ſpun to the griſt of from four to four one fourth ounces the hier, or two cuts of the common reel, laid two fold, and twiſted to the degree of common ſtitching thread, is much of the ſame ſize as the twine of which the weſt country nets are made; this, after paying for the different operations of ſpinning, doubling, &c. (it was twiſted indeed in my own family), ſtood me about 10 d. per lb.; one and a half lb. of this made the deeping, and ſix lb. the net; I got the deepings wrought at 10 d. each; ſo each net ſtood 8 s. 4 d. beſides barking and mounting.

Now three and a half of theſe deepings meaſure 42 yards long, equal to two Yarmouth ones of 12 yards; therefore, if three and one-half deepings are wrought for 2 s. 11 d. one piece of 21 yards at that rate will coſt one ſhilling and fivepence halfpenny; but were a more liberal price given, ſuch as a ſhilling the ſhort, and 1 s. 9 d. the long deeping, this is ſtill 30 per cent. under the Yarmouth price; and at this rate, I am certain, almoſt any quantity might be got wrought.

Since

Since theſe nets were made, I got a ſmall piece of Oſtend net, and am told it is much the ſame ſize as the Dutch uſe; the twine is about double the thickneſs of the weſt country net twine, but conſiderably ſmaller than the Yarmouth or Dunbar muſt be, as 42 yards ſmall twine deepings weighs five one fourth lbs.; this, were the twine as thick again, will be ten and one-half lbs. conſequently 21 yards will weigh five and one-fourth lbs.

I have lately converſed with a twine-ſpinner, and find, that good hemp, at preſent worth L. 1 : 10 s. per cwt. will yield 84 lbs. of dreſſed hemp, fit for twine-ſpinning, and about 24 lbs. tow, worth 3s.—the dreſſing with oil will coſt from 4 s. to 4 s. 6 d. which reduces the value of the hemp to 5 d. per lb. This can be ſpun for 3 d. of the griſt of 8 oz. to the hier of yarn (1 oz. of this twine meaſures 40 yards), which brings the twine to 8 d. per lb. Four deepings of 5 1-4th lb. each, is 21 lb. and at 8 d. is 14 s. ſterling,—working four deepings, at 1 s. 9 d. is 7 s. Thus the net is made, of the ſame dimenſions of a Yarmouth one, for L. 1 : 1 s. ſterling.

Seventy ſuch nets will make a fleet of 735 fathoms long of meſh work, by 11 yards, or five and one-half fathoms deep. This, when taken in, in the uſual manner of one third, makes 490 fathoms at the back rope, and is rather more than ſufficient for a veſſel of 30 tons. It will contain 16,170 ſquare yards of a two-inch meſh; but as I ſuppoſe two inches is rather ſmall for deep ſea fiſhing,

fiſhing, for a little diſtance from land, the fiſh is always found of a larger ſize and better quality.

Were they made of a two and one-half inch meſh, the ſame number of meſhes will extend their depth to ſeven fathoms, at the ſame or leſs expence of workmanſhip, as it occaſions many fewer to be wrought in length; for, were the ſame number wrought as of the two inches, as 11 yards gives 14 in breadth, then 21 in length would give betwixt 26 and 27, ſo that there is nearly one-4th part leſs value of work in the two and one half than in the two inch meſh net.

There will, no doubt, be a ſmall matter of more twine required; but when the proportion of it is conſidered that is occupied by the knots, two of which being neceſſary to each meſh, and that there are nearly one fourth fewer in the one than the other, it cannot be much; however, allowing it to be two and one-half lb. this hardly compenſates the value of work ſaved; therefore the price of the two and one-half inch meſh net, altho' three yards deeper, and ſixty-three yards more ſquare meaſure, is much the ſame as the other.

If it is found neceſſary to adopt the Yarmouth ſize of twine, then 29 lb. will be needed to the net. This, at 8 d. is 19 s. 4 d. working 7 s. which brings the price up to L. 1 : 6 : 4 ſterling. By the firſt calculation, 70 nets will coſt L. 73 : 10 s. and by the ſecond L. 92 : 3 : 4.

For

For mounting theſe, in the Dutch and Yarmouth manner, there are needed, for each fleet, firſt, 2520 fathoms of ſmall line, made of ſmall beſt white rope-yarn, laid three-ply, the one half of which ſpun and laid the right way, the other half ſpun and laid the wrong way, to be laid on with ſtrong twine round the upper edge and ends of the nets, for ſtrengthening them, as they are ſuſpended by this to the back-rope; the two different lays act in oppoſition to each other, and prevent their twiſting and writhing, as a ſingle rope does when wet.

The next is ſhort pieces of line, about 21 inches long, made of ſmall white rope-yarn, twiſted hard, and laid double, having a bight or eye on one end, through which the other end is paſſed, and thus put upon the ſmall lines on the edge of the net, at about a ſpan or ſeven and one half inches diſtance from each other, for tying the nets to the ropes upon which the corks are put. Each net will require a hundred, when put on at the diſtance mentioned, and 7000 for the whole fleet. The rope yarn for this will weigh 35 lb. at 5d. 14s. 7d.—twiſting or making theſe 5s. or 6s.—and for the whole 1l. ſterling.

As he was a foreigner who recommended theſe to me, who ſpoke the language very imperfectly, and could not give a proper name to them, nor deſcribe the method of making them, on applying to a rope work, I found they could deviſe no way for making them but plaiting by hand. This I ſaw would be tedious and expenſive. Upon a little reflection, I ſtuck a ſmall iron ſpike, the point bent

bent a little upwards, into the edge of a ſhelf, a little diſtance from a wall, and another ſpike into a lead weight of 2 lb. the point bent ſideways, declining down a little. By putting the ends of the rope-yarn, cut in proper lengths, upon theſe ſpikes with a hitch, and the weight twirled round, gives it any degree of twiſt needed very quickly. When the upper end is alſo brought down to the lower ſpike, and ſuſpended by the bight in the middle, the weight being twirled round again, gives it the neceſſary after-twiſt. And by this ſimple method, a boy of ten or twelve years of age may make ſeveral hundreds in a day; although, perhaps, where they are in the practice, they may ſtill have a better method.

The back-ropes, upon which the corks are put, ſhould alſo be put double, the one part ſpun and laid the right, the other the wrong way. As each net requires ſeven fathoms, beſides ſpliced eyes at the one end, and about eighteen inches at the other for tying, the ſingle length required is about 530 fathoms, the double 1060. This is ſpun of beſt hemp into ſmall yarn, and laid nine threads, which girths about an inch, and will weigh 270 lbs. This, at 5 d. per lb. is L. 3 : 10 : 10 ſterling.

Nets of ſmall twine being light, require but little cork, in proportion to thoſe weightier; for ſuch a fleet of weſt country nets, two and one-half cwt. would anſwer, allowing for waſte in cutting; for thoſe of double weight I will ſtate 5 cwt. at 20 s. which, with cutting, may be L. 5 : 5 s. ſterling.

Their

Their ſize may be various, as the cork will cut, putting on a larger and leſſer one alternately, but their ſhape ſhould invariably be that of a longiſh oval, the ſides, ends, and edges pared as ſmooth and free of rags as poſſible, to prevent their injuring the nets, notched on both ſides of each end, for receiving the ropes betwixt which they are put, and ſecured at each end, and in the middle, by tarred ſpun yarn, or thick ſtrong twine, for which purpoſe I will allow L. 1 ſterling.

I ſhall proceed with the ſubject in my next, and am, &c.

F. C.

LETTER III.

SIR,

I WILL beg leave to ſay a few words here of the method of faſtening the nets to theſe corked back-ropes. Suppoſing them mounted in the manner repreſented, theſe ropes ſtretched betwixt two poſts, or otherwiſe, three feet from the ground, the net laid along under it, beginning with the end having the eye; take the outermoſt ſhort ſeiſing or ſtrap in the right hand, placing the left thumb upon the back-rope, paſs the ſtrap over the thumb and rope the firſt turn, then paſs it two more turns round the rope and ſtrap, a little forward of the point of the thumb, a third turn round the rope only, bringing up the end betwixt the rope and ſtrap, drawing out the thumb from below the firſt turn, and put in the end of the ſtrap in its place, keeping the point of the thumb upon the point of it, until, with the right hand, the edge of the net is puſhed from you, ſo as to draw down the ſlack of the ſtrap, to keep the point ſecure. When the ſtraps are all put on in this manner, exactly at five inches diſtance, as they are put on the net at $7\frac{1}{2}$, it takes it in juſt the uſual proportion of one third; and, by attending to this ſimple rule, he who never mounted a net may do it as effectually and well as he that has done it often before—a little practice will teach to do it quickly. The hitch deſcribed is both ſecure and eaſily done and undone; by it the ſeiſings that ſuſpend the net to the buſs-rope, as well as the buoy-ſtraps, are ſecured to the buſs-rope.

The

The ſeiſings for putting to the nets to the buſs-rope are uſed of various lengths, from five to ten fathoms; they are alſo made of beſt hemp, ſpun into ſuch threads that a rope of eighteen of them meaſures about $1\frac{5}{8}$ inch circumference; they are put on at ten fathoms diſtance. Reckoning ten fathoms to each, which is rather too long, the fleet requires 50, and 500 fathoms length, which will weigh 150 lb. and at 5 d. is L. 3 : 2 : 6.

We will allow L. 4 for twine and workmanſhip of laying the deepings into nets; and as 10,000 ſquare yards of nets were barked, &c. at Greenock for L. 2, I ſuppoſe this fleet may be done for L. 8 or L. 9, but I will ſtate L. 10.

Now, 70 nets of the firſt calculation, at 21s. each, is - - -	L.	73	10 0
2520 fathoms ſmall line, for lacing on the edges and ends of the nets, 200 lb. at 5 d.		4	3 4
7000 ſhort ſtraps, with twiſting and making, - - - -		1	0 0
1060 fathoms of back-ropes, weighing 170 lb. at 5 d. - - -		3	10 10
5 cwt. of cork, with cutting, - - -		5	5 0
Spun yarn for ſecuring the cork, and workmanſhip, - - -		1	0 0
50 ſeiſings, 500 fathoms long, weighing 150 lb. at 5 d. - - -		3	2 6
Twine and workmanſhip in lacing the deepings into nets, - - -		4	0 0
Carry over	L.	95	11 8

Brought over	L. 95	11	8
Barking the nets and ropes, -	10	0	0
	L. 105	11	8
At this rate, 20 fleets, being two to each veſſel, will coſt - - -	L. 2111	13	4

There will be about 540 fathoms of buſs-rope required for ſuch a fleet; becauſe, in riding at the nets, it is neceſſary there be 30 or 40 fathoms, or even more, diſtance betwixt them and the veſſel, to prevent her motion from agitating them, but as little as poſſible in blowing weather. Thoſe next the veſſel, having always moſt ſtrain, require to be thickeſt. I will ſuppoſe them to run thus:—

120 fathoms five inch hawſer, weighing 6 cwt. 1 qr.—120 fathoms, 4½ inches, weighing 5 cwt.—120 fathoms, 4 inches, weighing 4 cwt.—and 190 fathoms, 3½ inches, weighing 4 cwt. 3 qrs.—making 20 cwt. in all, at 34 s.	L. 34	0	0
45 ſmall caſks, the ſize of half anchors, for buoys, placed upon the buſs-rope, at ten fathoms diſtance, with ſeiſings and ſtraps, at 2 s. - - -	4	10	0
3 larger caſks, for more conſpicuous buoys, with ſtraps, &c. at 3 s. 4 d. - -	0	10	0
Carry over	L. 39	0	0

Brought over	L. 39	0	0
Spun yarn for marking the ten fathom diſtances on the buſs-rope,	1	0	0
	L. 40	0	0
Ten ſets of theſe, being one to each veſſel, amounts to	L. 400	0	0

Theſe calculations, it is hoped, will not be found far from the truth. They are meant to be rather over than under. Thoſe of the ropes for mounting the nets are made from meaſuring and weighing a certain quantity of ropes made and barked at Yarmouth, for the expreſs purpoſes they are mentioned.

The two largeſt buſs-ropes, it is ſuppoſed, may ſerve the double purpoſe of cables to ſmall veſſels, and leſſen their outfit expence. The quantity of nets is with the largeſt for the ſize of theſe veſſels; as 440 fathoms make half a mile, I reckon that ſufficient: But as herrings make excellent bait in cod-fiſhing, every veſſel that is employed in that branch ought to be furniſhed with a certain proportion of nets to catch them (for they are to be got at all ſeaſons round our coaſt), I thought it better to include two fleets of 50 fathoms each for this purpoſe here, than make a ſeparate calculation for them afterwards.

Beſides

Beſides all theſe, it would be neceſſary for ſuch a company to employ from L. 500 to L. 1000 in the manufacture of nets, to bring forward a gradual ſupply, as the ſtock will be conſtantly wearing out. It will be found of great conſequence to every adventurer in the fiſheries to attend to this circumſtance, and keep a proper ſupply, particularly if their ſituation is ſuch, that a quantity could not be got to buy at a ſhort notice.

To thoſe who were willing to adventure with a ſmall capital, the laſt fiſhery bill was very indulgent indeed; it enforced no more than 250 ſquare yards to the ton. This is only 7500 for 30 tons; now 40 of the foreſaid nets, of 2 inch meſh, meaſures 9240 yards, and $2\frac{1}{2}$ inches, 11,760.

I have been the more tediouſly minute in theſe calculations for two reaſons—Firſt, That, when I began to ſpeculate upon the ſubject myſelf, ſome years ago, I could find nothing to direct me. Suppoſing that others may find themſelves in the ſame predicament at the preſent period, for their information theſe are offered; from them the expence of making, as well as mounting, any given quantity may be eaſily aſcertained. If it ſhall be found uſeful, the wiſh of the writer will be attained.

And, ſecondly, becauſe a gentleman, very reſpectable indeed, both as to character and fortune, to whoſe advice much deference ſeems very juſtly to be paid, has given, what I have reaſon to think, and, if farther is neceſſary,

neceſſary, am ready to prove, an exceeding high calculation of the value of nets, and what I alſo think a miſtaken opinion, relative to the now neceſſity of two fleets of nets for fiſhing veſſels. Mr Fall, I hope, will excuſe me for thus differing in ſentiment, as I cannot by any means attribute to him an intention either to miſlead or deceive.

If nets are only made at Dunbar by the fiſhermen themſelves, for their own uſe, and valuing their time at what they think they are entitled to for it, they may put the price they are ſaid to do upon them; but I apprehend it is of ſome conſequence to endeavour to convince my countrymen, that this moſt eſſential requiſite for proſecuting the fiſheries can be made much cheaper than is there charged.

As to opinions, they are free and varrious, as the object happens to ſtrike upon the forming mind. I will only beg leave to obſerve, that, in early ages, when our anceſtors ſeem to have underſtood and practiſed fiſhing better than we do at preſent, they were at pains to ſhift their fleets as often as poſſible. Upon the ſame principles, the Yarmouth people never fiſh above three or four weeks at once with a fleet, without ſhifting, although they meet with no accidents to need repairs, and as much oftener as is neceſſary.

It is notorious the Dutch do ſhift; but their operations being carried on at a diſtance from home, prevents

their

their doing it ſo often as at Yarmouth. Reaſon points out the propriety of this meaſure; for nets are as liable to be injured in the firſt, as any other part of the ſeaſon; and if it ſhall ſo happen, without another fleet to ſhift them, the chance of the ſeaſon may be loſt in its very prime, although it might have been ſuch a ſucceſsful one, that one or two nights fiſhing would have compenſated for the additional expence.

The ſooner nets are repaired, after they begin to break, ſo much the better; therefore prudence ſhould dictate to every intelligent adventurer, that, whatever quantity his veſſel fiſh with, there ought always to be a good proportion kept in reſerve: For, ſhould no accident happen to need repairs, which is hardly ſuppoſeable for an article ſo liable to caſualties, in the long ſeaſon, when the operations may be continued, it will be abſolutely neceſſary that they be dried and rebarked, elſe they will be ſo weakened, by being continually wet, that they may be completely worn out in the courſe of one ſeaſon.

The manufacture of nets is an article that merits peculiar attention, if it be poſſible to rouſe the ſpirit of our people to the proſecution of the fiſheries upon right principles, as great quantities of them will be needed; and it will be found of much conſequence to the public, that proviſion be made for furniſhing adventurers with thoſe of a good quality, upon reaſonable terms, made upon ſome general principles as to length, breadth, weight, and ſize of the meſh. The hemp ſhould be of the very beſt quality;

quality; the manner of ſpinning and twiſt given both in the ſingle and double is not only of importance in the wear, but alſo to the ſucceſs of the fiſhery.

This branch is peculiarly applicable to the intended villages in the Highlands, and may give employ to many of their inhabitants. It is a ſimple and light work, more fit for women, boys, and girls, than men, either of whom, old or young, may ſoon learn it. About Yarmouth and Leoſtoffe, they are entirely made by women, poor people kept in their charity workhouſes, and youngſters, who are put to it as early as ſeven or eight years of age, by which means they learn to do it with great facility.

About all towns there generally are a number of youths of both ſexes, that, either through want or neglect of their parents, trifle away their time in idleneſs, and acquire villainous habits, which renders them dangerous in and a nuiſance to ſociety through life, who might become valuable members of it, were they employed in this or any other uſeful work, wherein they could earn a tolerable ſubſiſtence, and inure them to early habits of induſtry. Is not this a matter worthy the attention of all Magiſtrates of royal boroughs, as well as that of the community at large?

My next ſhall give the value of lines, &c. In the mean time, I remain, &c.

C. F.

LETTER IV.

SIR,

MY laſt concluded with an eſtimate of the value of nets. Fiſhing lines are of much leſs value than a proper quantity of the others for equipping veſſels. Hand lines are uſed of various thickneſs and length, according to the depth of water they are intended to be employed in. What is reckoned a good ſize for the Iceland fiſhery is ſuch as will anſwer well for long lines, although they will amount to a ſmall matter more than might ſerve the general run of our fiſheries. I will adhere to them in this calculation. They are uſually wanted, and made 120 fathoms long, and weigh from 8 to 9 lb. ſold at 10 d. per lb. and coſt from 7 s. to 7 s. 6 d. Suppoſing the crews to conſiſt of ten people, it will be neceſſary there be two or three ſpare lines for each, either on board or near at hand, in caſe of accident. This makes 40 to each veſſel, which at 7 s. 6 d. is L. 15 0 0

200 fathoms of ſmall lines for ſnoods, weighing 4 lb. at 1 s. 0 4 0

200 hooks—they are uſed of very different ſizes and value, from 2 s. 6 d. to 8 s. per hundred—but what anſwers at Iceland are worth about 5 s. 0 10 0

Carry over L. 15 14 0

Brought over	L. 15	14	0
20 leaden ſinkers, properly fitted with wires gives ten ſpare ones, in caſe of loſſes, which ſometimes happen—they are made of various weights, from 2 to 8 or 9 lb.—I will value theſe at 2 s.	2	0	0
10 bramſkins, or leather aprons, (painted or tarred canvaſs will anſwer for this)—but I will rate theſe at 4 s. each,	2	0	0
10 lb. ſmall twine for putting to hooks, at 1 s.	0	10	0
1 iron clip with a wooden handle, for taking on board the fiſh, for each perſon, may coſt, in the whole,	0	4	0
6 ſplitting knives at 4 d.	0	2	0
	L. 20	10	0
Such a ſet to each of the ten veſſels will amount to	L. 205	0	0

The length of long lines is quite optional, and they are very differently mounted, many places having ſome peculiar manner of their own. Upon moſt parts of the north-eaſt coaſts of Scotland, the ſnoods are uſed about a fathom

fathom long, and placed from two to three fathoms aſunder. This is by far too much, as it gives them fewer hooks upon their lines than they could admit of.

The Dutch, when they uſe the long line, and the Engliſh, in the cod ſmacks, mount theirs with ſnoods of twenty-ſeven inches long, placed a fathom diſtant from each other. Theſe, when on board, are kept in longiſh baſkets, bitted from end to end of it, the baſkets having pieces of wood, with deep notches or groves in them, ſtanding upright in one of the ſides of the baſket, into which the ends of the ſnoods are put, the hooks hanging outward. This prevents their entangling the lines, and is at ſame time extremely handy for baiting.

3550 fathoms of line reach four miles—this at 7 s. 6 d. per 120,	L.	11	2 0
3550 ſnoods thirty inch long, is 1500 fathoms, worth 2 s. per hundred, is -		1	10 0
600 fathoms of lines for buoy ropes at 7 s. 6 d. per 120, - - -		1	13 0
3 buoys of wood, fitted with flagſtaffs, at 5 s.—15 s.——3 leather ditto, 1 s. 8 d.—5 s.		1	0 0
5000 hooks, to give ſome ſpare ones—thoſe fit for this are 3 s. per hundred, - -		7	10 0
Carry over	L.	22	15 0

Brought over	L. 22	15	0
12 lb. ſmall twine for putting to the hooks, &c. with a reſerve, -	0	12	0
10 baſkets, Suppoſing them worth 2 s. each,	1	0	0
	L. 24	7	0
Ten ſuch fleets, being one to each veſſel, amounts to - - -	L. 243	10	0
Perhaps it will be neceſſary to keep a reſerve of hooks and lines of more value, -	200	0	0
	L. 443	10	0

It will be of much importance to keep always a conſiderable quantity of ſalt on hand—I will ſtate the commencement with 10,000 buſhels. This at 8 d. is L. 333: 6: 8 ſterling. It is an article that may be delivered at any ſtation in the Highlands, by veſſels bound to the eaſt from Liverpool, at an eaſy freight.

Barrels muſt alſo be provided in ample ſtore.—As coopers muſt be had, for trimming, repairing, ſtriking up, and heading theſe; and as the ſtaves and hoops can be delivered at a trifle of freight, in proportion to that of caſk, it will be neceſſary for ſuch a company to have them, or at leaſt the greateſt part of them, made at their

principal

principal fiſhing ſtation. However, I will ſuppoſe 5000 of them bought to begin with; this is 500 for each veſſel. The preſent price upon the eaſt coaſt is 3 s. 6 d. each, and amounts to L. 875 ſterling.

It would be tedious to enter into the minutiæ of every article of proviſion neceſſary for ſhip ſtores. I will therefore cut ſhort, by obſerving, that it will be much for the general intereſt of the trade to introduce a regular œconomical and wholeſome regimen, to be varied a little through the different days of the week. As fiſh ought to compoſe the greateſt part of it, a few ſimple and plain directions may be procured and given, for dreſſing theſe in ſundry different ways, to diverſify the treat, and prevent them from palling upon their appetites.

Beſides fiſh of their daily capture, I will calculate the other proviſions at 6 d. per day the head, which I reckon abundantly ſufficient. This, for 100 people, the crews conſiſting of ten men and boys in each of the ten veſſels, is 50 s. per day, and juſt L. 300 for four months, or 120 days. I will not compute for any longer time here, as I think the produce of their labours may be bringing in returns much about this time, or ſoon after.

Perhaps it may be found neceſſary to advance L. 400 or L. 500 partly in procuring inſtructing fiſhers, whatever nation they are of, and to the other fiſhermen, for the ſupport of their families, before returns come round. The Dutch ſeem mighty jealous at preſent, having publiſh-

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ed prohibitory placarts, to intimidate their people from entering into our employ. What Briton is there that ought not and muſt feel the inſult of this? Does it not convey an idea, that they ſuppoſe us deficient in ſenſe, ſpirit, ingenuity or judgment, to improve our fiſheries, without the aid of Dutchmen? And is it not extremely mortifying to be thought ſo of? However, had it not been merited by our long and unaccountable bungling, it had not been offered. But let us not deſpond for all this. Should we be diſappointed from a diſtant quarter, I hope there will be found at home a ſufficient degree of ſpirit, an ingenuity too, to enable us of ourſelves to carry improvements into effect, if only thoſe who have it in their power will call it forth.

All fiſhers, or at leaſt the beſt part of every crew, ſhould be intereſted in the ſucceſs of their labours, to encourage induſtrious exertions; therefore their monthly wages ſhould be moderate. The premium ought to run upon the laſt of herrings, and the weight, not the tale, of larger fiſh, elſe they may take their ſtation in ſhallow water, where the number taken may be many, although of little value, unleſs their dimenſions are condeſcended upon.

The principal expences being enumerated, we will recapitulate them, to collect the whole amount of the firſt outlay.

10 veſſels at L. 150 each, is	L. 1500 0 0
Carry over	L. 1500 0 0

Brought over				L. 1500	0 0
20 fleets of nets, value	L. 2111	13	4		
10 ſets of buſs ropes with buoys, &c.	400	0	0		
				2511	13 4
10 ſets of hand lines &c.	205	0	0		
10 fleets of long lines,	243	10	0		
				448	10 0
Money employed in bringing forward a ſtock of nets, - -				500	0 0
Stock of lines, hooks, &c. -				200	0 0
10,000 buſhels of Britiſh ſalt, at 8 d.				333	6 8
5000 barrels, at 3 s. 6 d.				875	0 0
Proviſions for 100 people, for four months, or 120 days, at 6 d. - -				300	0 0
Money ſuppoſed advanced to fiſhers and their families, - -				500	0 0
				L. 7168	10 0

It

It is granted there muſt be a conſiderable expence incurred in the outſet, beſide all theſe, in managers ſalaries, labourers wages, freights, &c. and, perhaps, the erection of buildings, unleſs the Joint Stock Company ſhall take the burden of theſe upon themſelves: Theſe are expences I cannot ſo eaſily, and will not pretend to aſcertain. I ſhall only obſerve, that there remains an ample reverſion of the ſuppoſed capital for all theſe; the returns of profit that may be expected and depended upon ſhall be mentioned in due courſe.

I wiſh to ſay as little as poſſible of the intended villages, as being a province I will not preſume to interfere with; I ſhall therefore confine myſelf to a few buildings, that if executed, I think may tend much to promote the general intereſt of the fiſheries; and begging leave to obſerve, that as the main ocean, not the lochs, is the principal field where either boats or decked veſſels will carry on their operations with the beſt chance of ſucceſs, the villages ſhould be ſet down in the firſt ſecure ſtation that is found within the lochs, that there be as little waſte of time or labour as poſſible, in ſailing or rowing to and from the fiſhing ground.

Of all the ſtations in the Highlands obſervable upon the map, and they are very numerous indeed, that of Lochmadie, or the ſmall iſland of Hermetra, if there is any tolerable harbour formed in the channel betwixt it and North Uiſt, is as good, if not the beſt of any, not only on account of its centrical ſituation for the fiſheries

to be carried on among the iſlands, in the Minch, Caledonian Ocean, &c. but its vicinity to the only practicable paſſage through the Hebrides to the Atlantic.

Here was the principal ſtation of the grand fiſhery eſtabliſhed in the reign, and carried on under the peculiar protection of King Charles the firſt; then was the time the importance and value of our fiſheries ſeem to have been properly underſtood, and certainly would have ſoon arrived, under the *royal* patronage, to an exalted degree of perfection, had not our wily neighbours the Dutch, who, foreſeeing the downfall of their own in the riſe of ours, been at pains, by their vile machinations, to foment the domeſtic quarrel engendered by the ſour ſullen ſpirit of the puritans, and marred the glorious proſpect; nor have they failed to throw what obſtructions they can in the way of every attempt that has hitherto been made towards their re-eſtabliſhment.

The buildings meant above are ciſterns of ſtone to be erected either below or above, but rather under the ſurface of the ground, for curing in pickle all kinds of fiſh, herrings in particular; and houſes to be heated with a ſtove for drying fiſh at all ſeaſons of the year, and in all kinds of weather.

This leads into the ſubject of fiſh curing; it is an extenſive field, upon which much might and ought to be ſaid; but as theſe letters are already, and unavoidably will be, extended to a length that may perhaps be thought

thought wearisome to many readers, it is necessary to be as brief as the nature of the thing will well admit of; I shall therefore confine myself to the most common methods of curing the general run of what is known to be a marketable commodity.

F. C.

LETTER V.

SIR,

FISH Curing is a branch of the fishery business of very great importance for promoting and insuring the continuance of quick demand and great consumpt both at foreign and domestic markets; it is what we are rather deficient in at present, leaving much scope for improvement, and sadly will we be to blame indeed if we do not improve; for vain will it be to think of meeting an experienced rival in a foreign market with any prospect of success, particularly in an article of food, unless much care, cleanness, and attention is bestowed, to present our fish for sale in the best condition they will admit of.

The many regulations of the Dutch upon herring-fishing, packing, and curing, appear rather finical, although it is probable they have been found necessary to check the procedure of a people prone to chicane. Perhaps this is not the only instance that might be adduced to show, that strong measures have been found proper

to

to compel individuals to attend to what in the end is much for their intereſt, although troubleſome or expenſive at firſt.

Eſtabliſhing conciſe, diſtinct, clear, and ſimple orders anent gilping, ſorting, packing, and repacking will be uſeful. Herrings ſhould be waſhed before repacking: If the bloody pickle is preſerved as it ought, where it can be done, it ſhould be paſſed through a ſearch or cloth, to ſeparate the ſcales and groſs matter from it, and boiled up and ſkimmed to purify the blood in it, before being put about the fiſh again, as nothing is more apt to turn rancid, or ſooner promotes putrefaction than it does: If the bloody pickle is not preſerved, boiling up a few of the damaged or ſmalleſt herrings, and putting the liquor among the pickle, will probably have the ſame effect in preſerving the fiſh.

As much of their oil as can ſhould be extracted from them; this muſt be done by luting with clay, ſmall wooden or earthen cups upon a narrow bung hole, pierced on purpoſe in the upper ſide of the caſk, when they and the cups are filled with pickle, in doing which the cup anſwers as a funnel, the oil, as being lighter, naturally forces its way to the ſurface of the pickle in the cup, where it is to be ſkimmed off with a ſpoon. This proceſs ſucceeds beſt in warm weather, that makes the oil aſcend copiouſly.

To forward this, it is cuſtomary for two men to paſs betwixt the tiers with ſticks in their hands, ſimilar to handſpikes,

handſpikes, having a pretty ſtout pin put into the ſide of them, at ſuch a diſtance from the lower end, that, when it is at the ground, the point of the pin touches the center of the barrel-head, and both preſſing at once upon each end of the caſk, makes the pickle bubble as if boiling in the cup, and with its motion it carries up the oil in its courſe.

In the careful performance of this ſimple operation, after the fiſh has been well ſalted or pined, and honeſtly packed, conſiſts the principal merit of the curing Aberdeen ſalmon, that has long ſince eſtabliſhed the character they ſtill retain, which gives them a preference of from 5s. to 10s. above all others at all the markets they appear in; and it is exactly the very ſame the Dutch uſe in curing their herrings; from us, I may ſay with certainty, they borrowed the practice; for it is notorious, Aberdeen ſalmon were as early in repute, if not earlier, than Dutch herrings; and the opportunities they had of learning this is conſpicuous; for, till within theſe ſeven years by-paſt, they were regularly exported in Dutch bottoms, and the operation chiefly performed before their people's eyes, while waiting their cargoes.

Doing this is of more utility than is generally imagined, particularly for ſuch as have a chance of being kept any time on hand, or ſent to a warm climate, as it prevents their gilding. Burning on the maker's name, and place of abode, as well as that of the proprietor, upon each barrel, will be ſerviceable, as it may lead to the detection of thoſe ill made or negligently cured.

The

The ſimple affair of gilping or gutting is very imperfectly done by our people; they uſe nothing but the fingers, and it is very common to tear away part of the belly, which leaves an ugly gap betwixt the head and body, that much disfigures the fiſh. All other nations uſe a ſharp pointed knife in doing this, and preſerves their proper ſymmetry. This operation, if poſſible, ſhould always be performed under a roof or awning, to defend them from the influence of the ſun's rays, that ſoftens and injures them greatly.

I am morally certain, that the erection of ciſterns for the cure of fiſh, is a meaſure, that, if properly executed, will be found of more real advantage to the intereſt of the herring fiſhing in general, and to that of boat fiſhing in particular, than any that has hitherto been ſpoken of or can, I almoſt may ſay, be deviſed.

From the long and deliberate attention I have paid to the ſubject, and from the many opportunities I have embraced of ſounding the opinions of intelligent tradeſmen, I am thoroughly convinced, that fiſh of all kinds may be as well cured in the ciſterns I have deſcribed, and preſerved (if care is beſtowed) for any reaſonable length of time, in a ſtate of as thorough ſafety as in the beſt vats or cloſe caſks.

A proper ſtock of ſalt ſhould be kept in them, and put under the charge of judicious managers, that takes the gill and adhering gut clean away, without hurting the body,

body, to take care that no fiſh is received into them but ſuch as are in good condition, that is, have not been too long taken, that they are cleanly gilped and well ſalted. Here the produce of many boats crews can be lodged at a very moderate expence, without endangering the waſte of a barrel or barrel hoop, until purchaſers appear, or offers are made from diſtant correſpondents, who may ſend caſks by the veſſels that receive, and are to carry them to market.

Will not this place the boat-fiſhers uopn a very independent footing in regard to ſales, and enable them to obtain a more liberal and fair price than they could do by any other means? Surely it will ſerve them infinitely more than the late indulgent clauſe of allowing the bounty veſſels to buy of the country boats, from which ſo much good is expected; for, as theſe veſſels are obliged by law to be properly equipped for catching their own cargoes, which they can do in the courſe of a few nights, when the fiſh happen to ſet into the lochs, when it well may be ſuppoſed they need not buy, or, if they do, it will be at a very low price indeed; ſo that it can only be in ſcanty gleaning ſeaſons that either party can derive any advantage from it; and as it is moſt likely it will prevent the attendanee of veſſels furniſhed with ſalt and caſks to buy fiſh, as uſual, it is a doubtful point with me, if the boats will not be more loſers than gainers by it.

If, as I hope I ſhall ſoon ſee, or at leaſt hear of, the bounty veſſels going out to ſea in queſt of the ſhoals of herrings

herrings at a diſtance from the lochs, the boats there cannot follow to ſell, conſequently they will be as effectually deprived of ſales to them as if it were prohibited.

One building of 100 feet long by 14 wide, gives ſeven ſeparate rooms or ciſterns, of 12 feet long, allowing two feet to each diviſion or partition wall; the ſquare contents of one of theſe rooms of 12 by 14, and 6½ feet deep, ſuppoſing them filled only 6 feet, gives 1008 feet, equal to 200 barrels, conſequently 1400 barrels in the whole ſeven; and, as many of theſe may be ranged along ſide of each other, as convenience of ſituation and other circumſtances will admit of or require: ſuppoſe ſix others, and ſeven in all, at one ſtation, they will contain 10,000 barrels within the ſquare of 100 feet each way; one ſurrounding wall will ſerve to incloſe the whole, with pillars of wood, brick, or ſtone, and run joiſts to ſupport the roof.

A few planks of wood ranged over the tops of the ciſterns, for gangways and bearers, will contain great quantities of caſks, although the ſide walls were no higher than ſeven or eight feet; and, if carried higher, ſo as to form two or more flats, it will make excellent lofts, wherein immenſe quantities of dry fiſh, fiſhing ſtores, naval ſtores, proviſions, &c. may be kept; the two outer ſides might be fitted up, as being well lighted, to give accommodation to many people; the end windows, it is ſuppoſed, muſt be reſerved for promoting a circulation of air, and giving light to the inner apartments.

A little practice will ſoon determine the proper method of working theſe ciſterns. In putting in and taking out the herrings, perhaps it will be neceſſary to prepare pretty broad flat frames of wicker work, to put under the feet of the labourers when at work in them, which, by dividing their weight, will prevent the fiſh from being injured by the preſſure. Theſe will be uſeful, too, to lay over the tops of the ciſterns when full, ſo as a ſufficient weight may be put upon them to preſs down the uppermoſt fiſh under the ſurface of the pickle, and thereby prevent their being ſpoiled by the air.

If they are ſubſtantially built of ſtone, cemented with lime properly prepared, they will need no repairs in an age, unleſs ſome ſmall matter to the roofs; and, if they are laid down near a proper landing place, will be equally convenient for the ſmall decked veſſels recommended for the fiſhing, who ſtow their fiſh in bulk, as for boat-fiſhers. A few additional hands to the crews can ſoon diſcharge their cargoes, and depoſit them here, where they may lie until they are thoroughly pined or impregnated with the ſalt, and ready for barrelling.

From 14 to 20 days will be ſufficient for this, when, if they are not to be barrelled directly, perhaps it will be found proper to ſhift them from one ciſtern to another, to ſeparate the bloody pickle from them, to be boiled, to correct and purify it before being put about them again; when, as before ſaid, they will be found in condition fit to keep any reaſonable length of time; nor

will they need much freſh ſalt at packing, if this puri-fied pickle is put about them in ſufficient quantity.

It is a good many years ſince the practicability of dry-ing fiſh in a houſe, heated with a ſtove, was fully aſcer-tained in Scotland. I ſuppoſe there is not any kind of fiſh that may not be dried in ſuch place in a very ſhort while, and that at no great expence; and as they may be cur-ed here with leſs ſalt than by any other means, (it is to be obſerved, that the leſs ſalt fiſh get, once they are thoroughly dry, they keep the better), and that at all ſeaſons of the year, wet or dry, froſty or ſnowy weather. I would therefore preſume to recommend, that they make one of theſe erections at leaſt in each intended village.

Cod, ling, tuſk, &c. may be dried in them in the uſual kind of dry ſalt fiſh, or made into ſtock fiſh, without any ſalt at all. Saiths, or col fiſh, are dry, but wholeſome food; they are valuable, when in proper ſeaſon, for the oil their livers yield; the quantity, I am informed, is not leſs, and the quality rather ſuperior to that of dog fiſh.

Small and middle-ſized ſkate, which makes a light and wholeſome food, even the large ones, if properly blooded (of this all kinds of them yield a great quantity) immediately when taken, will, when cut up in long thin pieces, dry well here, and be found marketable.

Dried

Dried flounders, plaice, and ſoles of all kinds, are in great repute at Dantzic, and other ports in the Baltic. Hollobut is a fiſh that abounds in amazing quantities upon many parts of our coaſt; they are a dry fiſh, and not often cured, altho' they take ſalt well, and may either be cured in the ciſterns and barrelled, or dried with a ſmall portion of ſalt, or without any in theſe ſtoves.—They and ſkate are fiſh that might be furniſhed at a very low rate for the Weſt India and other markets.

Codlings, haddocks, and all other kinds of ſmall fiſh, may be dried here with or without ſalt. I have reaſon to think drying of herrings in them would be an improvement upon reddening, which is done by the ſmoak of wood; but, I apprehend, all fat fiſh, ſuch as herrings, mackrel, ſalmon, &c. muſt get ſalt more or leſs before they are dried in them and cured; they muſt be done with a very ſlow and deliberate heat, to diſcharge the oil as much as poſſible; when the beſt is done, they will have a greater tendency to turn moiſt than fiſh of a drier nature.

Theſe ſtove-houſes will require to be divided into ſeparate rooms, and furniſhed with many both fixed and moveable laths of wood, ſimilar to the Yarmouth Red Herring Houſes; a little practice, with attention, will lead to the propereſt method of fitting them up, and ſhow whether the ſtoves will anſwer beſt placed in the center of the apartments, and the flue carried perpendicularly up or round the walls, to prolong and increaſe the

the heat; and very ſhort experience, under any thing of judicious obſervation, will ſoon eſtabliſh a right management in tempering the fires.

When people come to be familiarized to this method, every boat's crew, though placed in the moſt lonely ſituation, if they can afford to buy a ſmall caſt metal ſtove, and build a hut, may dry their fiſh upon ropes of heath, or any other coarſe matter, ſtretched acroſs its width or length, as effectually as in the moſt expenſive ones.

C. F.

LETTER VI.

SIR,

THE ſubject of this letter ſhall be devoted to fiſhing. I ſhall begin with *herring-fiſhing*. It is truly humiliating to reflect upon its preſent ſtate, being quite the reverſe of what it ſhould be, in the hands of thoſe, who, as a maritime, would wiſh or expect to be viewed in the light of either a commercial, enterpriſing, or an induſtrious people. This, with what is formerly, and probably may be ſaid, will be thought by many as treating the ſubject with too much aſperity. I muſt own, I warmly feel for the honour of my country, which I think peculiarly injured by our management of the matter, and would wiſh, as far as my weak abilities can, to convince my countrymen of their error, by ſpreading them broadly

out

out to their fulleſt views; for, until theſe are ſeen in their proper light, it is in vain to look for improvement; till then they will not be thought neceſſary, and will not be attempted.

It is not eaſy to be accounted for how this buſineſs has fallen from what it once was among ourſelves, in times we eſteem much leſs enlightened than the preſent, having the annual example of the Dutch and the people of Yarmouth too before our eyes. The beſt apology I can frame for it, is the ſingular convenience of boat-fiſhing in the lochs, which has no doubt led our people to follow it and boat-fiſhing along the coaſt, until the buſs-rope method was forgot altogether.

If, at any period of time, the loch fiſhing was ſo regular as to deſerve being depended upon, it is no great wonder it ſhould be preferred; but when it came to be ſo precarious as it has been theſe many years bypaſt, the great wonder is, that no attempts have been made to try the other, when, perhaps, going the diſtance of a few leagues, or even miles, without the lochs, and ſhooting their nets there, would have accompliſhed a good fiſhing; for, it is well known, the fiſh will frequently be ſeen in very great bodies a few miles without, when none enter within them, from cauſes we are, and probably ever will remain ignorant of.

But indeed the great obſtinacy with which the argument is ſupported by thoſe engaged in the trade, that

no

no other than boat-fiſhing is applicable to the Highlands, is truly aſtoniſhing, and ſhows there is no inclination to make the experiment, until it is done for them. They ſeem to regret their diſtance from Shetland, as if it could be ſuppoſed the herrings had a predilection for that ſtation only, becauſe the people upon the eaſt coaſt formerly, and the Dutch, have long continued to find abundance of fiſh in that neighbourhood, and that they were there only to be found during the ſummer months, the beſt fiſhing weather, and when they are to be got in good condition, ſo as to be fit for all markets; not adverting to the accounts that have been long ſince given, and often repeated, of the vaſt conſumpt of herrings that are actually made by the immenſe flocks of ſea fowls (who, when attended to, are found the fiſhermen's beſt director) that frequent the Iſlands of St Kilda, Flanan, Rona, &c. in the neighbourhood of which they certainly procure their food, which is known to be herrings; and where, when properly ſought for, perhaps will be found a fiſhery fully as productive, or ſuperior to that of Shetland, (for it is to be obſerved, that the largeſt and beſt herrings, got by our fiſhers, are thoſe caught in Loch Rogue, upon the weſt ſide of the Lewes), whither veſſels from the Frith of Clyde, and that neighbourhood, would have but a ſhort clear run, and plenty of ſea room.

Beſide what may be done in the Caledonian Ocean, among the Iſlands, where, notwithſtanding all that has been ſaid to the contrary, I am clearly of opinion, and will

will continue to be ſo, until the contrary is proved by actual experiment, much fiſh may be taken in this method, by carefully attending to the courſe of tides, and ſhooting only ſuch proportion of the nets as can be eaſily hawled on board within the time to be allowed for driving, when the tide happens to be ſetting into narrow channels, or upon the land.

Shooting and hawling nets by the buſs-rope muſt ſurely be a ſimple proceſs, and might be eaſily acquired by thoſe accuſtomed to working nets by boats, would our people who have veſſels only take courage to try it; their ordinary cables and hawſers, with very little addition, would anſwer for buſs-ropes to ſhoot all the nets they uſually carry. I would here deſcribe the method, as I have had it repeatedly done to me by practical fiſhers; but as Mr Knox has done it in his account of the Yarmouth fiſhing, it would be needleſs to repeat it here; but experienced fiſhers muſt be had to put them fairly into the method, before it can be much attempted with any probability of ſucceſs.

The veſſels preſently in uſe, with ſome little alteration, may be ſuitable for this method of fiſhing; thoſe who mean to pack their fiſh in barrels on board, will be obliged to give them a good many ſtaunchions, let down betwixt the timbers, raiſed the uſual height of quarter rails the whole length, and lined in the outſide with boards; this will give them the advantage of deep waiſts, without lowering their decks and leſſening their burden;

to

to theſe ſtaunchions, when fitted with ringbolts, the barrels may be laſhed, ſtanding on end, for the purpoſe of packing; without this precaution they could not be brought upon deck with any degree of ſafety, for fear of rolling and tumbling overboard.

The veſſels deſcribed in the ſecond and third of theſe letters, as formerly ſaid, will be found ſingularly convenient for this trade, being calculated to ſerve as a medium betwixt boats and large expenſive veſſels; from them every advantage that might be expected from either may be depended upon, at little expence. They will comfortably lodge the neceſſary number of men, ſtow a conſiderable quantity of fiſh, and may be wrought either within the lochs, or in the open ocean, as proſpects offer beſt. The method of curing fiſh in bulk will relieve the crews of much labour that may be advantageouſly employed in other branches; and the facility with which they may deliver their cargoes into the recommended ciſterns to be finally cured, packed and exported in larger veſſels, will leave them ſo much at freedom to proſecute the buſineſs without interruption, that a few hours may ſerve to diſcharge the produce of their labours, take on board proviſions and water, a freſh ſtock of ſalt, and ſhift their nets, when they may run to ſea again directly, and thus almoſt unceaſingly purſue their operations in a deliberate ſyſtematic manner, whereby they will be enabled to repeat their trips or voyages very frequently; and the reſult will be found highly beneficial to all concerned in it, as well as the public at large.

When

When the proper method of fiſhing is eſtabliſhed round all our coaſts, (for it is equally applicable to the eaſt as well as the weſt, and it is certain that herrings abound upon it as plenty as any where elſe, and that ſeveral of its towns would make as fine fiſhing ſtations as any round the iſland), and were there ciſterns built of ſizes proportioned to the number of veſſels or boats employed at each ſtation or village, the quantity that might be taken may be great indeed. Then would our fiſheries wear quite another aſpect than they do at preſent; there would no complaint be heard of having only half cargoes in the courſe of the ſeaſon; inſtead of which they may, and certainly will make ſeveral whole ones, beſide the very great advantage that may be derived from carrying on cod-fiſhing at the ſame time; for, notwithſtanding the prohibition againſt catching and curing cod, during the herring ſeaſon, is very ſenſibly done away, little advantage is to be expected from it while the fiſhery is confined to the lochs; but when they go out to and keep the ſea, the caſe will be quite altered; if they are induſtrious, the quantity taken may be ſuch as to inſure a profit, were the herrings failing altogether, which is not to be ſuppoſed poſſible; for, although the Dutch may have better and worſe ſeaſons, we never hear of their failing them, nor will they us when we follow a proper plan. They always, as ſoon as their nets are hauled in the morning, and their herrings gutted and ſalted, immediately ſet to work with their hand lines to fiſh forcod. By practiſing this method, the laſt veſſel that was employed from Aberdeen, properly fitted out for herring

fiſhing, about fifty years ago, catched ſix laſts of fine cod, ling, and tuſk, in the courſe of the ſeaſon, as can be certified by the cooper who was on board her, and is yet in life.

When the buſs-rope method of fiſhing is introduced, and the nets are made ſtronger than they are uſed at preſent, and when the fiſh happen to ſet into the lochs in ſuch bodies as repreſented, and the depth of the water is not too much, they may be uſed as a ſein; or if they are not hauled on ſhore, they may at leaſt be uſed in ſuch a manner as to ſurround and retain great numbers of them, until they are gradually taken out by ſmall bag nets with handles, in the way the Swediſh fiſhery is conducted.

It is ſeveral years ſince a net was contrived, that may, it is preſumed, be uſed with great ſucceſs in ſuch vaſt ſhoals of herrings as are frequently fallen in with in the German ocean, and upon the north and weſt coaſts, although as yet no proper opportunity has occurred of trying it. It is compoſed of a frame, conſiſting of four pieces of wood of any given length, ſuppoſe 9 feet 6 inches broad, by $1\frac{1}{2}$ or 2 inches thick, or round altogether, made of tough ſtraight wood, to be tied together at the corners with pieces of ropes, or fitted with iron hinges: In the laſt caſe, two of the hinge pins at oppoſite corners muſt be made to draw out, on purpoſe to let the frame flap together, for the convenience of ſtowing in little room when not in uſe. One of the ſides

of

of the frame is to be loaded with a ſufficient quantity of weighty matter, either lead, iron or ſtone, to ſink it quickly. To this frame a bag-net made of pretty ſtrong twine is to be ſtrongly laſhed, to what is deſigned as the under edge of it: It ſhould not be of a large meſh, of a proportional ſize, ſuppoſe 9 feet deep, and ſufficiently wide, to hang fair, without overſtretching the meſhes.

The ſlings for working it by are to be made of two pieces of ropes ſeiſed double, leaving an open eye in the middle, the four ends to be paſſed to, and fixed to, or round the four corners. Care muſt be taken to ſling it equally, ſo as, when ſuſpended by the largeſt or main hauling rope, to be tied to the center of the ſlings, it may hang fair.

To the other ſide of the frame, oppoſite to that loaded weight, another ſling, made of one piece of rope, is to be tied near the two ends of the ſide of the frame, with an eye formed in the center of it alſo, for fixing a ſmall rope for dipping or letting down the net: It will likewiſe be neceſſary that the net be loaded with ſome little weight, in the ſame ſide that the weight is put upon the frame.

When thus fitted, a ſmall boom or long piece of wood muſt be prepared, one end of which muſt be tied to the maſt, or any part of the veſſel that will reſiſt a preſſure; the length required ſuch, that the outer end muſt at leaſt project more than half the diameter of the net over the veſſel's

veſſel's ſide: If this outer end be ſupported by a tackle or any rope paſſing through a block at or near the maſt head, that it can be hoiſted up or let down a little, ſo much the better. To this end of the boom there is to be ſecured a double block of two ſhieves, through which the two ropes for letting down and hoiſting up the net is to paſs; alſo two braces or ſtays, the one leading forward, the other aft, for ſteadying it. On putting the net overboard, by keeping taght the ſmall rope, it will go down into the ſea the weightieſt ſide foremoſt, occupying no more ſurface of the water than juſt the length and breadth of one ſide of the frame; and when at the depth thought neceſſary, by letting go the ſmall rope, and hauling up the larger one, the net falls horizontally, and, in coming up, will bring with it whatever comes in its way; conſequently, where herrings are in ſuch bodies as they are ſaid to ſwim in, great quantities of them at once; and the dips, when unſucceſsful, may be repeated very quickly. Upon a ſucceſsful haul, it is to be ſuſpended alongſide, the edge of the net juſt above the ſurface of the water, where the fiſh are retained alive until they are taken out by ſmall handled bag-nets.

The ſquare contents of this net is above 140 barrels; but making allowance for its not hanging fair, although upon a reſiſtant preſſure, it will expand itſelf much farther: Were it yielding a fourth, fifth, or tenth part of this quantity, for a few minutes labour, it will be allowed to ſurpaſs any thing yet in uſe; and the expence is but a trifle in proportion to its apparent utility.

It is ſuppoſed a larger one than the above may be uſed; but a little practice will beſt determine whether larger or leſſer ones will be moſt convenient, or what number can be wrought at once. Boats may uſe them of a ſmall ſize in ſmooth water, and decked veſſels in any weather that is not very tempeſtuous. In any thing of a rough ſea, it will be neceſſary that the boom have ſufficient length to force the net to ſome diſtance from the veſſel's ſide, for fear of injuring it.

It is only where the body of herrings is very thick, and in the night time, it can be uſed with any proſpect of ſucceſs; and it will be found eaſieſt wrought about the turn of tide, or where there is little current or tide-way. For ſmall ones, good ſtout hogſhead hoops may ſerve for frames, fixing bag-nets to them, and ſlinging it in three parts; for the leſs interruption there is in the mouth, ſo much the better.

I apprehend it may be ſingularly ſerviceable in catching dogs. They are a voracious fearleſs fiſh. By ſuſpending bait of any kind, even pieces of themſelves within it, I ſuppoſe great quantities of them might be taken. Perhaps it might be found uſeful in other fiſheries alſo; By placing a light above it, fiſh of various kinds may be amuſed until ſurpriſed by it; for it is well known, that fiſh in general, ſalmon in particular, run upon light. However, I will not preſume to ſay farther in its favour, but leave to future practice to aſcertain and eſtabliſh its importance and utility.

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By theſe various methods of fiſhing, as well as others that may be deviſed, it may happen that the quantity of herrings taken in ſome ſeaſons may far ſurpaſs the poſſibility of finding markets for them, even at the loweſt price they could be ſold for, to defray the neceſſary charge of ſending them to any diſtance; in which event, the ſurplus may be boiled, as the Swedes do, for extracting the oil: The roes of theſe may be taken out for the purpoſe of making caviar. For doing this, proper directions ſhould be procured: If oil is neceſſary for the purpoſe, perhaps their own oil may be found as fit as any other. From an experiment lately made, I find it will not be poſſible to prevent its turning thick in cold weather, for I obſerved it to condenſe into a gummy ſubſtance when floating upon the ſurface of clean pickle; notwithſtanding which, it may be found ſerviceable for many purpoſes; for olive oil, that is ſo eſſential to our woolen manufactures, and the price of which runs ſo high as from L.40 to L.50 per ton, alſo thickens with cold.

When theſe herrings are boiled to a proper conſiſtence, the oil ſkimmed off, and the groſſer parts ſeparated by paſſing the liquor through a woolen bag, theſe groſſer parts will make excellent food for hogs, ducks, geeſe, or other poultry, and the liquor may be boiled down to a proper thickneſs to make iſinglaſs. This, as it will contain the whole eſſence of the herrings, if cleanly gone about, may be uſeful for many purpoſes. In the ſame veſſels that ſerve to boil the herrings may the heads and inteſtines

inteſtines of cod, ling, &c. be alſo boiled for making iſinglaſs, and thereby turn every part of the fiſheries to account in ſome or ſhape other. In the ſtoves mentioned for drying fiſh with heated air, this iſinglaſs may be thoroughly dried in a ſhort time, perfectly clean and pure.

Theſe ſtoves and boilers will be ſingularly uſeful for barking and drying herring nets. It has been formerly ſaid, how neceſſary it is to have this done frequently, without which it would be impoſſible to keep them in any tolerable condition. At all places I have heard of, the drying and frequent airings are performed in the open air: The inconvenience and riſk from rain, in doing this, muſt appear conſpicuous; the convenience and facility with which it can be done in theſe, in any weather, at all ſeaſons, is obvious.

C. F.

LETTER VII.

Of Cod-Fiſhing.

SIR,

I AM ſorry to ſay, that our cod fiſhery is in no better ſituation than our herring fiſhery. However, as a ſpirit of adventure in the Iceland fiſhery has commenced, the general ſucceſs that has attended thoſe who have tried it, will certainly increaſe the number, and be the means

means of helping us forward in improving this branch of the fiſhing buſineſs. But although it has frequently been told the great advantage the Dutch derive from fiſhing for cod as well as herrings on our coaſt, many of whoſe veſſels arrive early in the ſpring, when they catch vaſt quantities of the prime of our fiſh, there ſeems as yet no diſpoſition for imitating them; ſo that all around the Scottiſh ſhores, nothing is practiſed or to be ſeen at this day, but boat-fiſhing, which is very precarious, and by which there is not much chance for the beſt fiſh, as they cannot venture out the proper diſtance, or keep the ſea.

Our people upon the eaſt coaſt are in general allowed to be very good fiſhers; they are certainly very induſtrious upon many parts of it in the way they have been accuſtomed to work, although they are rather far behind what they ought to be, to give them a full title to that character; as they cannot continue long at ſea in the ſmall boats they generally uſe, they fiſh with the long line, that they may more effectually avail themſelves of the ſhort time they are out.

From the application of reaſon, and attention to the ſubject, it occurred to me, that by the long line method of fiſhing, the hooks and bait muſt lie at the bottom, where many of them muſt get into hollows, upon rocky ground, or among weeds, where the fiſh have no opportunity of getting a fair bite, conſequently the chance of ſucceſs is greatly reduced; therefore I ſuppoſed, that, were

were theſe lines fitted with ſmall buoys of cork upon each ſnood, a little diſtant from the hook, juſt ſufficient to float the hook and bait, but not to raiſe the line from the bottom, being thus ſuſpended in the water, the natural agitation of it, either from the effect of the wind or tide, would keep the hook vibrating in continual motion, ſimilar to that of the hand, as practiſed by the moſt induſtrious hand-line fiſhers, and be a great improvement upon long line fiſhing; but I did not at firſt conceive the full importance of it.

I had often heard our fiſhermen acknowledge, that, when fiſhing upon the Marr Bank, about fifteen leagues from the land, where thoſe who have pretty large boats venture out a few weeks in the heat of ſummer, and where they fall in with many Dutch veſſels, the crews of which will be hauling on board vaſt quantities of fine cod and ling; while they, upon the very ſame ground, with a long line fitted with ſeveral hundred hooks, will not perhaps catch five or ſix of theſe among the whole, hardly any thing but ſkate and hollobut, fiſh that are no doubt of value to them, as they are brought on ſhore directly, where they always find a good and ready market: the ſkate are particularly valuable at that ſeaſon, on account of the oil their livers yield, being worth from 6d. to 1s. each, or even more; but theſe fiſh the Dutch can and do carefully avoid.

I naturally aſked them if they knew the reaſon of the ſuperior ſucceſs of the Dutch. They readily owned,

that they are more expert fiſhers, but wiſhed chiefly to attribute it to the better bait they uſe, being eels, herrings, and mackarel in their ſeaſon; and I partly credited their report, until ſome time ago, that I accidentally fell in with a Fleming from Oſtend, a moſt intelligent fiſher indeed. Upon hearing him repeat the many ſucceſsful fiſhings he had had upon our coaſt, and ſpeak in raptures of what he could do, if ſettled here, and furniſhed with a veſſel to his mind, I aſked him, which way he accounted for it, that our fiſhers were ſo much leſs ſucceſsful in getting the proper merchantable fiſh than his countrymen and the Dutch? His anſwer was, that, as our people uſe the long line, the whole hooks of which lying upon the ground, where ſkate, hollobut, and all the other tribe of flat fiſh feed, it is next to an impoſſibility, uſe what bait they will, that they ſhould have any thing elſe upon them: That the Dutch and they fiſh with the hand line; in doing which, they juſt feel the bottom with the leaden ſinker, and immediately draw back the length of from three to ſix feet, where, if there are cod or ling, they are ſure to find them, and generally avoid the flat fiſh, although they will at times fall in with ſome of them: Theſe, when at a diſtance from home, and do not chuſe to be encumbered with them, are, upon coming up, cut off the hook, and ſet adrift, except what they chuſe to reſerve for ſhip's uſe: When the ſkate livers are full, they ſometimes take them out for making oil.

I aſked him, if the Dutch, and they too, do not frequently uſe this long line? He ſaid, they did, but never where they had a dependence upon getting proper cod and ling, only for ſmall fiſh, and chiefly for little ſkate, flounders, &c. Theſe anſwers fully explained what had appeared ſomething myſterious to me, and anſwered my queries, in a perfectly ſimple and rational manner, and made the idea of the ſmall buoy, or piece of cork, upon the ſnood of each hook, recur upon my mind with redoubled force; as I had been at pains before this, I was at more afterwards, to recommend it to every fiſher with whom I converſed (and I have with a good many) to try it; all of them readily owned that they were convinced it would have the deſired effect, and, in ſeeming compliance to my urgent requeſt of making the experiment, have promiſed; but I cannot hear of one of them that has done it, for which no other reaſon can be aſſigned, but an infatuated adherence to old practices, for which they are ſingularly remarkable in general.

I thought they would have deviated in this inſtance, on account of its very great apparent proſpect of ſo materially promoting their intereſt, particularly as they all allow it bids fair to relieve them from the ſtar-fiſh (what they call the croſs-feet), who form one of the greateſt grievances they labour under along the whole coaſt, devouring their bait in ſuch an extraordinary manner, that, upon many parts of the beſt fiſhing ground *(no new bank, but as old occupied as any in Europe)*, it is rare if one hook and bait in three eſcapes them, the whole ſnoods of

their

their lines being covered with them very frequently, and their fiſhing prodigiouſly injured.

They have felt the hardſhip of this ſo forcibly along the coaſt of Cairnbulg, Rattray-head, &c. that they entered into a reſolution, ſome years ago, to bring on ſhore all that were got upon their lines, to try to deſtroy them; they continued to do this until they collected great heaps of them at each fiſhing village; but, after conſiderable perſeverance, they found them no thinner, and were obliged to deſiſt, and patiently ſubmit to an inconvenience they found they could not ſurmount.

If ever the ſmall buoys upon each ſnood of the long line come fairly into uſe, I am morally certain, it will benefit the fiſheries in a ſingular manner; for where much is done at preſent without them, much more will then be done with them. If I ſtate the increaſed ſucceſs at fourfold, upon the hooks and lines preſently in uſe, I have reaſon to think I am far within bounds, unleſs it be in caſes where their labours are meant to be directed to a flat fiſh fiſhery.

Yet, however much may be expected to be done by an improved boat fiſhery, when brought to the utmoſt perfection, precarious and uncertain it muſt always be, in proportion to that carried on in any kind of decked veſſel, wherein men could purſue their labours in ſafety, and refreſh themſelves with a regular meal of comfortable warm proviſions after their fatigue.

The

The great waſte of time and labour, in going to and coming from the fiſhing ground, lays them under much hardſhips; beſides, it frequently happens, that, in the very beſt part of the fiſhing ſeaſon, the weather will be ſuch, that an open boat dare not venture out any diſtance to ſea; or, when out, or in the midſt of their moſt ſucceſsful operations, they muſt leave off, and make for the ſhore at the hazard of their lives, which not ſeldom fall a ſacrifice in weather that would not interrupt a decked veſſel.

Thoſe who have hitherto adventured in the Highland white fiſheries, have only followed the old track of boat fiſhing, their veſſel lying moored in ſome loch or other, the ſame way as in the herring trade, while their boats go to ſea, in which they are often interrupted for ſeveral days together, although in the ſummer time.—I am clearly of opinion, that, were they to keep the ſea with their veſſels, and employ the uſual number of hands they carry out, in working hand lines, they would be far more ſucceſsful, at much leſs fatigue, unleſs their lines were mounted with the recommended buoys, and, even then, I ſee no cauſe why both methods may not be uſed at once.

I well know, that, in fiſhing with the long line out, without the ſight of land, they muſt keep conſtantly near them, while they are out, for fear of loſing them; but where the fiſhery is carried on within ſight, and at a ſhort diſtance from land, (as the caſe is ſaid to be upon

on much fine fiſhing ground within the Hebrides, where they can eaſily take ſuch marks as will enable them readily to find their lines again,) they may ſhoot them, and allow the veſſel to drive either ſouth or north, as wind and tide ſets, returning once in twenty-four hours, to under-run them, taking off the fiſh, baiting their hooks, and laying them down again. It cannot be doubted but this method would much promote their ſucceſs, as it gives them a double chance.

There has been nothing done of any conſequence upon the eaſt coaſt in the cod fiſhing way theſe many years bypaſt, but by our fiſhers themſelves, whoſe abilities and ſubſtance are far too limited to enable them to do much. This is the more to be regreted, when the very great advantage the Dutch are known to reap from their labours upon it is conſidered. It is certain, they not only know the value, but the ſituation alſo of our fiſhing ground infinitely better than we do ourſelves, and avail themſelves of this knowledge far more than I find is generally imagined.

I know not what has induced Mr Fall, or thoſe with whom he coincides, to ſay, " I agree entirely in opinion ' with thoſe who think that the fiſhery in the North ' Sea, between the coaſts of Scotland and Holland, can- ' not be conſidered as furniſhing fiſh in ſufficient quan- ' tity for foreign markets, or of preſenting an object of ' ſufficient magnitude to engage public attention."

Certain

Certain it is, that this ground yields a very great quantity of fiſh to the Dutch; and why ſhould it not do ſo to us, who can, and certainly will, when we fall into a right method of conducting our operations, carry on the fiſhing in this ſea, at much leſs expence than they, and conſequently may under-ſell them?

Mr Fall will not ſurely refuſe, becauſe the world knows, that it was the fiſhery in this very ſea that firſt raiſed and long ſupported theſe people as a commercial nation; and although their trade in that line is now far from what it has been, it ſtill is a very important one to them, and to which they pay every attention, proſecuting it with perſevering induſtry, all along the coaſt of Scotland, and acroſs the north ſea, betwixt it and the continent of Europe, as our fiſhermen and ſeamen, who have frequent opportunities of ſeeing them upon the coaſt, as well as in their paſſage to and from the Baltic, &c. will declare.

If the truth of this ſhall be doubted by any, the writer hereof pledges himſelf to produce ſeveral boats and veſſels crews, who can declare, that, in April 1786, they fell in with fourteen ſail of Dutch veſſels, all fiſhing in view at once, ſome of them not ſix miles from the ſhore (ſuch ſights are quite familiar and common to them); and, much about the ſame time, the ſloop Bon Accord, Captain Blyth, in her voyage from Gottenburgh to Eyemouth, ſailed thro' a fleet of near twenty ſail of them, about eighteen leagues to the north eaſt

of

of St Abbe's Head (no great diſtance this from Dunbar); and can it be believed, that it is not a profitable buſineſs to them when they follow it ſo aſſiduouſly?

Is it not a pity that Mr Fall was not better informed before he gave ſuch a decided opinion, as ſo much deference is paid to it? However, I cannot better confute ſuch arguments, nor more forcibly convey an idea of the advantage that might be derived from following the example of the Dutch, than plainly narrating what lately offered itſelf to the full view of the inhabitants of a conſiderable manufacturing and mercantile town upon the coaſt; and making a comparative calculation of what we ourſelves might do upon this ſame deſpiſed eaſt coaſt ſea.

Upon the 21ſt of April 1786, the tide ſurveyor of that port, ſeeing a Dutch veſſel in the Bay, boarded her, and found her to be, I think, the Catharina of Rotterdam, Airy Dochire maſter, a well dogger of ſixty tons burden, whoſe crew conſiſted of eight men and one boy, had been eight days from home, ſix of which had been ſpent in the paſſage, and two days only in fiſhing, moſt of which two they were put off the beſt fiſhing ground, being ſet in ſhore by north-eaſterly winds; yet, in that ſhort time, had taken eight barrels of fine cod and ling (about a ton), beſide turbot in her well, of which it is certain ſhe would have ſome, although no enquiry was made. She had herrings caught in nets, ſhot in the night-time,

night-time, for bait; ſhe was a ſtout built veſſel, and probably fitted out at L. 600 or L. 700 Sterling.

I will ſuppoſe this ſum laid out in ſuch ſmall veſſels as I have formerly deſcribed, which I apprehend may be uſed upon the eaſt coaſt, as well as in the Highlands, with this difference only, of being a ſmall matter ſtouter timbered, on account of frequently taking the ground in dry harbours. It will build, rig, and fully equip with hand lines, and a few nets to catch bait, *four* of theſe ſmall veſſels. They can conveniently accommodate nine hands, conſequently give employ to thirty-ſix men and boys, whoſe wages are over-rated at a ſhilling per day over-head. However, not to ſcrimp the calculation, I will ſtate L. 11 Sterling for ſix days, allowing ſixpence per day for proviſions, excluſive of fiſh, is L. 5 : 10, and both L. 16 : 10.

Now, if they fiſh equally well with this Dutchman, who had eight barrels in two days, (a gentleman from Shetland ſays, their ſucceſs in that neighbourhood far exceeds this, frequently amounting to ſix, ſeven, or eight barrels a-day), and who will doubt, but they may be ſoon brought to do ſo, the produce of ſix days will be twenty-four barrels to each, and ninety-ſix barrels among the four. Valuing theſe at the moderate rate of 30s. per barrel, it makes L. 144 Sterling, yielding a handſome profit indeed, were they in general falling far ſhort of this quantity, or the price greatly reduced, and ſufficient to allow full ſcope for premiums, or a proportion of the

value of the captures to the fiſhermen, to ſtimulate their induſtry.

This is independent of flat fiſh, ſuch as turbot, hollobut, ſkate, &c. of which the quantity would be conſiderable, and of which they could relieve themſelves frequently, by running in ſhore, and throwing out ſignals, if it were meant to ſave loſs of time by coming into port. Boats might be ordered out to receive them for immediate uſe, as far as they will ſell, or to be cured in the manner hinted. The cod too could be frequently landed, to be dried and rendered ſuitable to many markets, and the livers of all theſe fiſh would make a conſiderable additional object.

The above is a fair ſtate of facts, and a plain ſimple calculation. Does it not hold out a flattering proſpect to thoſe who will take up and follow this branch upon proper principles? Where have we the trade that will yield returns any thing nearly ſimilar to this, at ſuch ſmall advance of capital? And if reports are not greatly exaggerated, the proſpect upon many parts of the weſt coaſt are ſtill more flattering.

I will beg leave to aſk my countrymen, if they think there can poſſibly be exhibited a more culpable inſtance of fatal indifference in a people neglecting to avail themſelves of advantages juſt at hand, and that might ſo eaſily be obtained. Much has been ſaid, of late, in praiſe of the

the Iceland fiſhery, and recent inſtances of ſucceſs ſhows it is deſerving; but a diſtant fiſhery muſt always be carried on in larger veſſels, at more expence, and to greater diſadvantage in every reſpect, than is needed for a home one.

C. F.

LETTER VIII.

SIR,

IT is to be obſerved, that, along the north-eaſt coaſt of Scotland, beſide the main bank at about fifteen leagues diſtance, where the depth runs from 30 to 40 fathoms, there are others within it having more water upon them; and between theſe are deep hollows, interſected with ſharp pointed reefs of rock, that frequently cut the fiſhermen's lines; part of theſe hollows are by our fiſhermen vulgarly called the *ſkate holes*. They form as great, or perhaps the greateſt, repoſitory of flat fiſh hitherto known in the world, and where boats of five and ſix tons burden will frequently be loaded in the courſe of a few hours.

Here, as well as all along the coaſt, the Dutch, and our own fiſhers alſo, catch a great many turbot; perhaps, upon inquiry, it will be found, great part of thoſe, with which they ſupply their own and London markets, are taken upon our coaſt, by collecting of which from their fiſhing veſſels when they come into port, and putting

ting them from time to time all on board of one, they feed the markets gradually. This practice enables them to draw ſuch a price for them as greatly promotes their intereſt in the fiſhery, and contributes to ſupport the circuitous navigation neceſſary in ſending them to ſupply the capital of Britain with this delicious fiſh caught upon the Scottiſh ſhores; while our own metropolis, notwithſtanding her rapid advances in all the conveniencies and elegancies of life, can rarely taſte of theſe, although undoubtedly her own, being quite dependent upon the precarious ſupply of fiſh of any kind that ſmall open boats can yield, not having one ſingle decked veſſel, either with or without a well to fiſh for her.

It is preſumed, that the Dutch being enabled to furniſh ſuch quantities of turbot as they do, is partly owing to the number of fiſhing veſſels they employ, from which, as above ſaid, I ſuppoſe they are collected; and, by knowing ſo well as they do from long experience, the proper ground for flat as well as round fiſh, they are and will be more ſucceſsful, until we acquire equal knowledge, and employ an equal number of veſſels and men.

It is more than probable there may be ſomething peculiar in their manner of fiſhing for turbot; of this, I could learn nothing certain from the fiſhermen, who informed me of their ſeeing them hawl theſe fiſh on board; for they had not ingenuity to make acute obſervations,

ſervations, even in the line of their own profeſſion; however, I will venture at a conjecture.

As turbot are a ground fiſh, and have but a ſmall mouth in proportion to that of the cod, who are taken with a larger hook than the other can be ſuppoſed to receive, I therefore apprehend, the Dutch muſt mount their hand-lines with both large and ſmall hooks, perhaps two of each; the ſmall placed lowermoſt, ſo as they may travel upon or hang very near the ground, while the larger cod hooks are at a proper diſtance above.—This will give a double chance at a very little additional trouble or expence. I know not if this is their method; but I think there is ſome reaſon to hope that it might be practiſed with ſucceſs. The only inconvenience I can ſee to attend the execution of it, is a riſk of the hook catching upon the ground as the veſſel drives over it; but as the hook is ſmall, and the ſnood required for it weak, either of them moſt ſoon give way to relieve the line, the capture of one turbot will amply compenſate the loſs of many of theſe ſmall hooks or ſnoods.

In caſe it ſhould happen that our fiſheries come to be proſecuted with any degree of ſpirit, I will venture to ſuggeſt a method whereby, I think, turbot may be preſerved alive, and ſent to a diſtant market. I well know this will be beſt done in veſſels having wells; but, as theſe are not fit for the herring fiſhery, they are not to be recommended for general uſe by us; however, another ſubſtitute may at leaſt be attempted, as the experiment

ment may be made at very little expence. When our fiſhers learn to furniſh themſelves with apparatus to procure proper bait, ſuch as herrings, which may be had at all ſeaſons, mackrel, &c. they may in time come to be purchaſers of the Thames lampreys, ſaid to be the beſt bait the Dutch have yet diſcovered, and which they carefully huſband, by cutting them up in ſmall pieces, placing one of them upon the point of the hook, when the reſt of it is filled with other bait; this, it appears, makes an excellent lure, and, no doubt, is the means of increaſing the capture of cod and ling, as well as turbot in particular.

Having heard the complaint of fiſhermen who have frequented the Highland white fiſhery, where they have ſuffered much for want of bait, and, knowing the hardſhips that many upon the eaſt coaſt labour under for want of this neceſſary article, I have thought, that, were a frame of ſplit aſh, or any ſuch elaſtic wood, made quite light and ſlender, in the ſhape of a ſmall boat, covered round either with a ſmall meſhed net, or coarſe open hemp cloth, it would retain fiſh of any kind; and, by admitting a free circulation of water, would preſerve them alive. Theſe might be towed along-ſide by means of a projecting boom or ſtern, as may be found moſt convenient for the working of the veſſel; they may be conſtructed large or ſmall, ſo as they may be taken down or put together in the courſe of a few minutes, and will be ſo light, that a ſingle man may take them on board,

when

when the ſeverity of the weather or other circumſtances may require it.

Were fiſhing veſſels furniſhing themſelves with theſe, beſide the advantage of keeping bait alive, by being put into them immediately off hooks, or out of nets, perhaps turbot, as well as ſalmon, eels, and other fiſh, may alſo be preſerved alive in them, at leaſt for ſome days, until, having a few of them, it were found neceſſary to run for ſome part of the coaſt, where proper conveniencies were erected, for keeping them until put on board a veſſel having a well, unleſs opportunities of doing ſo at ſea ſhall happen, which may be frequent upon the eaſt coaſt during the ſpring and ſummer, when well ſmacks are actually paſſing and repaſſing to and from London, with freſh and kitted ſalmon, almoſt weekly; the owners of which, being London fiſhmongers, would certainly be ready to contract for them in any quantity that could be furniſhed, and give reaſonable prices for them, proportioned to their ſizes, and would perhaps order their ſmacks to cruize a few days occaſionally, to receive them into their wells as ſoon after being taken as poſſible.

In the event of having any conſiderable number of turbot in theſe machines or diving boats, when it were coming to blow, rather than loſe them by being taken on board, when they would die, perhaps, upon trial, it may be found, that, by adding a certain proportion of weight to them, they may be ſunk 10, 15, or 20 fathoms under the ſurface, and prevent the fiſh from being

ing injured by the agitation of the waves, which will be much leſs felt below than above; to prevent their going farther down than intended, they may be ſuſpended by a pretty large buoy, ſlung by the ſtem or ſtern of them.

Were this method found to ſucceed, and that it may do ſo in part I can hardly doubt, the advantage that will reſult to the fiſhery by preſerving, and to the public by being furniſhed at home with this moſt valuable of all ſmall fiſh, beſides other ſpecies, will be great. It is equally applicable to the Highland fiſhery as to that of the eaſt coaſt; although ſituated farther from London, yet thoſe got on the north and north-weſt end of the iſland may be ſent there, or, with thoſe got farther ſouth, ſent to Glaſgow, Liverpool, Briſtol, and ſo to Bath, &c.

When we ſhall attend to our true intereſt, and proſecute our fiſheries in ſuch veſſels as I have deſcribed, or any other that experience ſhall find fitteſt for the purpoſe, our captures will increaſe to an aſtoniſhing amount, and the quality will be found exceedingly improved; for it is the weakeſt of all kinds of fiſh got either in ſhallow water or near the land, the ſtrongeſt and beſt at a little diſtance; it will alſo enable us to avail ourſelves of ſundry other branches of it, to aſſiſt and ſupport the buſineſs.

For inſtance, the ſun-fiſh, or baſking ſhark, is very valuable on account of the great quantity of oil their livers

livers yield. Few of them are taken at preſent, in proportion to what might be, by veſſels conſtantly driving about at ſea, were they furniſhed with proper harpoons and lines, with a few light lances or ſpears. As they frequently lie upon the ſurface of the water, they are to be ſeen at a diſtance, when the veſſel may either ſail or row up to them; and as they are ſo ſtupid or fearleſs, although quite inoffenſive, they are not eaſily alarmed, but allow themſelves to be ſtruck in any part the harpooneer chuſes. By the preſent practice, it would appear, it frequently takes many hours to kill them; but were a few of the crew furniſhed with ſpears, and all inflicting wounds at the time the harpoon was ſtruck, it would make a ſhort proceſs and ſoon diſpatch them.

It is well known, that whales of various ſpecies, and ſome of them large ones, frequent both the eaſt, weſt, and north coaſts of Scotland, during the ſummer and autumn months; it is true, they are much more active and reſtleſs, conſequently give leſs chance and fewer opportunities of ſtriking them, than it appears they do in the earlier part of the ſeaſon, and farther to the northward; but I would fondly hope, ways and means may be fallen upon to get ſome of them. If the poor Indians at and to the north of Kamſchatka, in their ſmall canoes, and with their ſimple apparatus, can overcome whales, it would ſurely be an inſult upon us to think, that, with our ſo far ſuperior conveniencies, we could not accompliſh the ſame.

I think I have a good many years ago ſeen it recommended in a Magazine, to throw a harpoon, with the line fixed to it, from a ſwivel gun, and I ſhould think it might be practicable to do it either by that or a blunderbuſs. I am well aware, that, by carrying the line along with it, its force muſt not only be checked, but its true direction greatly diverted; however, by practice, perhaps experience might be attained to throw or ſhoot them pretty truly. When they miſs, the line will bring the harpoon on board again, ſo that it cannot be loſt; when it takes place, and holds, it will no doubt be neceſſary to tie an empty caſk, well bunged up, to the end of the line, and throw it over-board, as the fiſh will run with ſuch velocity (her courſe perhaps againſt the wind too), that it would be impoſſible to keep pace with her in the veſſel.

The empty caſk will ſerve as a buoy to ſhow what courſe ſhe takes, and where ſhe is. If the veſſel can poſſibly get up by the time ſhe need to blow, and if they have a few blunderbuſſes on board, and a parcel of lances, whoſe ſhafts are made of light wood, or hollow reeds, by firing a volley of them into her, it would wound her ſo mortally, that ſhe would ſoon die with loſs of blood; any of the lances that were miſſing will come to the ſurface again, the weight of the iron preponderating, and make the lighter end ſtand perpendicular in the water, and lead to its recovery.

Porpoiſes are a fiſh that may be turned to account, from the quantity of ſpeck or blubber they yield. It is probable

probable they alſo may be killed in the foregoing manner; but they are quick in their motions, and I am afraid it will require a very ready and ſteady hand to ſhoot them: However, there is another method has occurred to me—I have been informed they will follow a new boat, or even a boat whoſe bottom has been lately paid, for a conſiderable time, as they generally go in ſhoals, or a few of them together; were a net made of ſmall line, of an eighteen or twenty-four inch meſh, of from five to ten fathoms depth, as experience ſhall find neceſſary, and any given or proper length, the upper edge of it floated on the ſurface with cork, when ſet—if it is found they will really follow a new tarred boat, I ſuppoſe they may be eaſily led to where the net is ſet, where they will entangle themſelves into it, until they are killed, by repeated ſtrokes of a ſpear, and towed on ſhore.

Campbell, in his Political Survey of Britain (wherein he has given as good an account of the Hebrides and weſt coaſt of Scotland, with the advantages that may be derived from the fiſheries there, as any I have yet ſeen), ſays, the Canadians have a peculiar method of dreſſing the ſkins of porpoiſes, that renders them, although quite thin and elaſtic, capable to reſiſt a piſtol bullet. As theſe people are now the ſubjects of Britain, would it not be worth while to enquire if they are poſſeſſed of ſuch an art? and to try to procure the neceſſary inſtructions for practiſing it here?

C. F.

LETTER

LETTER IX.

SIR,

I SHALL now beg leave to recommend ſome particular modes of Fiſhing, by which ſome branches of the Fiſhery might be much improved.

Fiſhing for ſkate, with hanging nets, is a method that might be practiſed with much ſucceſs, upon many parts of our coaſt where theſe fiſh abound, but where the method is not ſo much as known to be practicable, although a great deal is done in this way, at the ſundry fiſhing towns in the entrance of the frith of Forth and other parts of the iſland.

They are made of pretty ſtout twine, much of the ſame ſize as that uſed for ſalmon nets; they are wrought 100 fathoms long, by 9 or 10 meſhes broad, of from 12 to 14 inches wide, taken in to about 50 fathoms long on the rope by $4\frac{1}{2}$ or 5 feet deep on the ſide rope. They are mounted with ſmall back ropes, both at the upper and under edges, of the thickneſs of middling ſized fiſhing lines; upon the upper edge is ſtrung a ſufficient number of ſmall pieces of cork, $1\frac{1}{2}$ inches ſquare by 1 inch thick, placed about a foot from each other, to float it from the ground, while the other ſide is loaded with ſtones, ſlung in nooſes at three fathoms diſtance, to keep it down to the ground; mounted in this manner, they are ſet acroſs the tide, as many of them tied together as the

the boat's crew can conveniently muſter, ſometimes, I am told, to the extent of two or three hundred fathoms in one fleet, having ſundry buoys placed at proper diſtances, made either of cork, wood, or ſkins.

Although ſkate is a very unlikely fiſh to be taken by a hanging net, it is a certain fact that vaſt quantities are thus taken; for when they are ſcouring along the ground in queſt of food, and find themſelves oppoſed by the net, they endeavour to force forward, in doing which, they throw up their tails; theſe entangling in the meſhes, while their ſnouts are engaged, retains them ſecure until the net is hauled up; they are left ſet in the ſea, and drawn as often as experience finds proper, or the weather will permit.

I procured one of theſe nets, properly mounted, offered to ſhow it, and even give the uſe of it to ſundry fiſhers upon the north-eaſt coaſt, in hopes it might induce them to put ſuch in practice; but no—they admire and admit the utility of this, and other improvements that have been pointed out to them, but it is no eaſy matter to prevail upon them to give into any thing they have not been accuſtomed to. This will always be the work of time, and not until actual experiment has made even the ſimpleſt thing appear obviouſly advantageous.

Much has been ſaid for theſe ſeveral years bypaſt, and ſomething has been done, to endeavour to convince our fiſhers of the great benefit they might derive from furniſhing

niſhing themſelves with herring nets, to enable them to avail themſelves of the ſhoals of theſe fiſh, that every year they have occaſion to ſee upon the coaſt, but hitherto without effect, until very lately, that one man, a little more diſpoſed to adventure than his neighbours, procured a few yards of net, which he uſes in the manner of what is called the ground drave, by ſetting it at night, in the entrance of a ſmall cove harbour betwixt rocks, and hauling it in the morning, whereby he has ſometimes got ſix, ſeven or eight hundred fine herrings in a night. The value of one night's fiſhing, at the price he can draw for them, amply compenſates the price of his net. It is ſurpriſing to think what ſpirit this little affair produced among his neighbours, and the avidity with which they have been enquiring for nets to buy, which gives a ray of hope they will open their eyes to their intereſt, and in time bring nets into uſe upon a part of our coaſt, where they may be uſed with great ſucceſs, although they have been long neglected.

A great deal might be done with lobſter nets, at many places upon our coaſt, were they properly introduced, where theſe fiſh are plenty, if there were demand for them. Vaſt quantities of their ſpawn are annually deſtroyed by poor people, who gather, boil, and ſell many buſhels of wilks, both in town and country, as publicly and in the ſame manner as gooſeberries, notwithſtanding there is an expreſs Act of Parliament to the contrary; but it is gone quite into diſuſe, at leaſt on our coaſt; ſo that they are not ſo much as forbid to do it, nor do many who buy them

them know that they are the embrio of a lobſter, although they are frequently ſeen, almoſt completely formed in theſe cells, at a particular time of the ſeaſon.

There are deeps upon ſome parts of our north coaſt, particularly off Gardenſtown, where eels abound ſo plentifully, that they preclude the fiſhermen from the poſſibility of availing themſelves of any other fiſhery upon them; for any lines that are ſhot, they have the bait devoured by them almoſt inſtantaneouſly; on that account they are abandoned, as theſe are a fiſh they hold in deteſtation; they are not accuſtomed to uſe them as bait, although they would certainly anſwer well; and they would by no means eat them, though they are highly eſteemed and reliſhed in many places. They are ſaid to ſell for 8d. per lb. in London. If the report of the fiſhers who gave me this information are to be credited, and they had no temptation to tell a falſehood, many thouſands might be taken here, either by baſkets, ſuch as are uſed in the river Thames and in Holland, for this purpoſe, or by nets conſtructed upon the ſame principles.

I apprehend a traul-net fiſhery is far from being applicable to the Scottiſh ſhores, which are rather too rugged, and much too fine fiſhing ground in general, at leaſt upon the eaſt coaſt, unleſs in ſome particular ſmall places, conſiſting of ſandy bays. This is a fiſhing moſt ſuitable for ſoft ſandy ground, and is at ſame time beſt adapted for the local accommodation of a freſh fiſh market, as turbot,

bot, flounders, ſoals, plaice, and ſmall ſkate, are the general capture; however, as the apparatus is no great expence, our fiſhing veſſels may be furniſhed with them, that they may uſe them, when they know themſelves upon proper ground, and are coming into port; for theſe fiſh will dry, and meet with a market in the eaſt country.

Many are the modes of fiſhing that may be collected from the practice of our own and other countries, or may be invented by the application of a little genius for the introduction of improvement, with attention to the ſubject; and much does it behove the public to compaſſionate the prejudiſed opinions of theſe people, and help them forward, by ſetting them a few good examples, upon plain, familiar, ſimple principles. To endeavour to encreaſe the quantity for country conſumpt is an object, even where it cannot be ſuppoſed much to extend the export trade; where it tends to both, the object is ſtill greater.

A want of contrivance in our fiſhers to procure proper bait, and keep it in good condition, lays them under great inconvenience. To illuſtrate which, I beg leave to obſerve, that there are thirteen large and ſmall fiſhing boats belonging to the harbour of Aberdeen, manned with ſix men and lads each, who, independent of the great inconvenience they labour under in general, on account of this want and fatigue ſuſtained in procuring it, by digging out of the ſand ſand-eels and logworms, which

which occupies a very conſiderable part not only of the fiſhers, but their whole families time, almoſt daily; they never, or rarely, can get to ſea on Monday mornings for want of bait, unleſs when they happen to have muſſels or earth-worms. Now they value their fiſhing, upon an average, at 3s. per man daily, when they do get to ſea, and as much for the boat, which makes a guinea for the boat and crew, and L. 13 : 13 : for all the thirteen : Suppoſe the weather favourable for going to ſea 40 out of 52 Mondays in the year, and if of this 40 they are incapacitated from going to ſea 25 (and I have reaſon to think they are more than that), brings the loſs ſuſtained by theſe poor people, for want of this neceſſary article, bait, at this one place, to L. 341 : 5 : Sterling yearly. To include the whole coaſt, and calculate the general loſs the fiſhers ſuſtain (and in them the country around it), would amount to a much larger ſum than can poſſibly be imagined by inconſiderate obſervers.

I have ſeen a net uſed in the Weſt Indies for catching fiſh of the anchovy ſize, that it may be ſuppoſed might be uſefully employed for this purpoſe; for it is well known our ſeas ſwarm with ſmall herrings, ſprats, ſhads, and ſand-eels, almoſt the whole year, and all of them make good bait. It is made of very fine ſmall twine, in a circular form, of ſuch ſize that it will ſpread ſixteen, eighteen, or twenty feet diameter. A ſmall line is ſeized round the edge of it, upon which a number of ſmall pieces of ſheet lead are put round, and ſlung by a line

fixed in the exact center of the net. When it is ſuſpended by this center rope, the lead upon the line round the edge of it, by the natural tendency of the weight, contracts it, ſo that, as it hangs, it occupies very little ſpace.

It is uſed thus:—A man holds the center part of the rope and net coiled up in his left hand, the other part of the net in his right—In this poſition, where the water is ſhallow, he wades in—where it is deep he muſt be in a boat—when he means to operate, he gives the outer part of the net in his right hand a horizontal ſwing, throwing the whole from him exactly at the ſame time, but the end of the line by ſuch a peculiar ſlight, that it inſtantaneouſly expands itſelf to the full breadth, the leads carrying it rapidly down in that direction—if the ground is ſandy, and clear of ſtones, it may be allowed to go to the bottom—in its deſcent the fiſh entangle themſelves in the meſhes, or are carried down to the ground—in drawing up it ſweeps the ground to its center, ſo that they cannot well eſcape—If the ground is rocky, it muſt be checked in its deſcent before it reach the bottom, when it operates in effect nearly as above ſaid. Were each boat's crew furniſhing themſelves with ſuch as theſe, of different ſized meſhes, larger and leſſer, they might be the means of affording them a ready ſupply of the beſt bait, at moſt ſeaſons of the year. By attending to the gulls, and other ſea fowls, they would direct them where to fiſh; and, were they procuring for themſelves

themſelves machines for keeping them alive, upon the principles formerly deſcribed, they might catch at once as many as might ſerve them many days, when thus preſerved.

C. F.

LETTER X.

SIR,

AS the improvement of our ſalt manufacture is a matter of much conſequence, I will, with due ſubmiſſion, preſume to ſuggeſt a hint upon the ſubject.—When it is conſidered, that all the common or culinary ſalt, except pit or rock ſalt, is made from the ſame material, *ſea-water*, it is ſuppoſed that, by proper attention and care, the artificial heat of fire may be ſo modified as to imitate the natural effect of the ſun, by evaporating the water in a gentler and more moderate manner than is preſently practiſed, and conſequently produce the ſame kind of ſalt.

The proceſs of making ſalt in warm climates is deſcribed thus: Sea-water is taken into reſervoirs, from whence it is occaſionally let into ſhallow pits of cloſe compact earth, where the ſun and dry air exhales the water by gentle evaporation, and leaves the ſalt conſolidated into pretty large pieces, which being extracted, by raking it out before the whole of the water is evaporated,

rated, muſt have leſs of the bittern or putreſcent quality in it, than when the whole is forced off, as in the common method of making Britiſh ſalt, which is by boiling the ſalt water in flat iron pans, ſeveral times filled up, throwing in a quantity of blood to fine it, until the water is all carried off, leaving the ſalt in a whitiſh ſubſtance, conſiſting of many ſmall particles.

It is imagined, that, by the ſtrong agitation of the water, or brine in boiling, the formation of the ſalt is deranged, and broke into ſmall flakes, inſtead of being formed into ſtrong cruſtations, as great ſalt is by ſlow exhalation. To imitate this effect of nature effectually, the writer of this ſuppoſes, that, as the whole ſtrength of the fire is not exhauſted when it goes from under the ſalt boilers, were a ſlight but cloſe building erected upon the end of the boil-houſe, and the vent divided into ſeveral flews running along the floor, over which flat leaden pans are to be placed; and were the ſalt brine conveyed into them by means of a pump and ſpout, when boiled down to a conſiderable degree of ſtrength, or brine made from rock ſalt and ſea-water put into ſuch, the heat paſſing alone under the lead pans will continue the evaporation at no additional expence; which, as the ſurface will be greatly expanded, will be found very rapid, without allowing them to come to the boil, or even to ſimmer; for, if it does either, it deſtroys the intended effect of the lead pans, which is meant and is ſuppoſed would make a very perfect imitation of the natural proceſs, and will yield a ſtrong ſalt.

Perhaps

Perhaps theſe leaden pans will bear to be ſeveral times filled up, before drawing out the ſalt from them; and as I find from Lord Dundonald's excellent treatiſe upon this ſubject, that Britiſh ſalt contains about one tenth part of bittern or extraneous ſalts, which, as it appears from his Lordſhip's method of refining, is ſooneſt diſſolved, and muſt be lateſt in forming, by attention to this ſlow proceſs, the operation may be continued until the proper ſalt is all or nearly all formed, when it may be raked from the bittern, and that quite cleaned out to begin the operation a-new.

It may be ſuppoſed, that the proceſs would be greatly accelerated, if the apartment, wherein the lead pans are, were lathed and plaiſtered above, leaving a few holes in the plaiſter roof, to which very light valves were fitted; and were a few ſtove flews led along from one end to the other, ſuſpended at ſome diſtance above the ſurface of the pans, it would contribute to rarify the ſteam, and force itſelf through the valve-holes.

Upon theſe principles, as a ſmall experiment, I diſſolved, in a flat earthen veſſel, as much ſalt as the water in the pan could contain in a fluid ſtate, making a ſtrong pickle; this was put into the ſtove of a ſugar-houſe, to evaporate the water, ſuppoſing it would have left the ſalt nearly in the ſtate of a ſolid cruſt, or in pieces of the ſize of foreign ſalt; but it was found formed into particles not larger than, and perfectly ſimilar to, its original ſhape; nor did it appear to have had any tendency to aſſume

aſſume the ſhape of ſquare hollow cones, as I have found ſtrong pickle do, when left to cool gradually, in former experiments. The flat pan was filled up again with pickle equally ſtrong; but, when the water was evaporated, it was found to have acted exactly as in the firſt caſe, lying in a regular lair above, without altering the ſize or ſhape of the firſt formed ſalt. I wiſhed to have continued the experiment, by beginning with ſea-water, and filling up the pan daily, as it evaporated; but as this might have given more trouble than perhaps would have been agreeable, it was diſcontinued.

Now I would think myſelf obliged by the opinion of any perſon verſant in chemical matters, (if any ſuch ſhall chance to caſt their eyes upon this), ſaying if they think ſuch a method of making ſalt, as hinted at, is likely to ſucceed, and to what they attribute the failure of the ſmall experiment.

C. F.

LETTER XI.

SIR,

I HAVE now, in a curſory and rather imperfect manner, gone over the ſubject of the fiſheries, and ſome matters immediately connected with them, ſhewing their very unproſperous ſtate at preſent, with the ſuppoſed cauſe; and giving ſundry hints at a few of the many improvements that have occurred to me that might be introduced; with a calculation of the neceſſary expence

that

that will attend the outfit of the propoſed inſtructive fiſhery.

To place the propriety and even neceſſity of ſetting a good example in a conſpicuous point of view, I muſt beg leave once more to take a ſhort retroſpective ſurvey. In doing which, it is found, that, ſince the acceſſion of King James VI. of Scotland, and I. of England, to the Britiſh throne, (a period of nearly two centuries), the nation has almoſt continually amuſed itſelf and the world with the importance of our fiſheries, in the diſplay of which many valuable performances have been wrote, from thoſe of Sir William Monſon (who made a voyage of obſervation to the Hebrides) and Sir Walter Raleigh, to thoſe of Mr Knox and Dr Anderſon.

Before and ſince the Union, many ſalutary laws have been enacted for encouraging the fiſheries; and, within the laſt thirty-five years, it appears the Britiſh Parliament has generouſly beſtowed no leſs than 400,000 l. in bounties. Yet, for all this, the real importance and true value of them remains in the ſame problematical ſtate, and our fiſhers in equal want of public aid to enable them to carry on their operations as ever; and I dare to maintain, that, in all human probability, they will always continue to be ſo until they alter their plan; and this they ſeem not diſpoſed to attempt, nor will they do it until the practicability and advantage of it is ſhewn them by actual practice.

Very

Very fine ſyſtems for erecting towns and villages in the Highlands, with the diſtribution of boats and annual premiums, have been laid before the public, as if this alone would inſtantaneouſly retrieve the fortunes of the inhabitants, and eſtabliſh the fiſheries upon a proſperous footing. Erecting the intended villages is undoubtedly a meaſure originating in the fineſt feelings of humanity, and highly expedient; it is no new one; the original deſign was undoubtedly laid by King James V. and meant to have been begun by his grandſon King James VI. but other important matters diverted his attention from it. Had not misfortunes overtaken King Charles I. it is highly probable, theſe diſtricts and our fiſheries had been upon a much more reſpectable footing than they are at preſent; however, what is paſt cannot be recalled; but let us not, my countrymen, allow ourſelves to be amuſed and deceived any longer with vain hopes; let us take example from former diſappointments, to be thoroughly convinced, that no reliance ought to be placed upon a boat-fiſhery, for accompliſhing the ſo much wiſhed for object.

Permit me to aſk this ſingle queſtion: Were the eighty intended villages built, and were ten thouſand boats employed in them, will this bring herrings or other fiſh into the lochs, or cloſe to the land, where theſe boats can catch them? I preſume, it will not be ſaid there is the moſt diſtant chance it will; conſequently the fiſhery will remain in ſtill the ſame precarious ſtate as ever, and ſucceſsful only by fits and ſtarts. The herring fiſhing

may

may fail altogether for ſeveral ſucceſſive ſeaſons, as it has but too often been known to do before; and, although cod-fiſhing in boats is not quite ſo precarious as the other, yet it is far from being ſuch as promiſes permanent proſpects of proſperity, to have a ſole or even a principal dependence upon.

From good information I have learned, that the ſeaſon before laſt, the cod-fiſhing at Stornoway in Lewis, where perhaps it is better underſtood than any where elſe in the Highlands, yielded L. 6 the man's ſhare, and is reckoned one of the beſt fiſhings ever remembered; and that of Shetland is ſaid not to yield above the one half of this; however, either of them makes but a poor equivalent for many months hard and hazardous labour, or the maintenance of a family.

What then muſt be the fate of theſe poor collected ſettlers, who cannot, with propriety, I ſuppoſe, be ranked in the claſs either of good fiſhers, farmers, or mechanics, if left without other reſources? Or, is it probable, that monied men will be tempted by ſuch proſpects to take up their reſidence among them, and lay out their capitals in providing ſtocks of grain and other neceſſaries to give out in credit, in hopes of payment from the produce of the fiſheries, while in the preſent precarious ſtate?—I much fear they will not.

Were the plan of the Fiſhing Company, recommended in the firſt of theſe letters, taken up either by the *Joint*

Stock Company, or any other ſet of public ſpirited gentlemen, for which no more money is required in the outſet than half the ſum devoted for a ſimilar purpoſe by one individual Iriſh patriot, I will endeavour to ſhow the advantages that will reſult from it to the nation at large, as well as to the Highlands and Iſlands in particular.

As brevity is neceſſary, and as it would be tedious to enter into the minutiæ of ſtating the profits to be expected from each branch of the fiſhery ſeparately, I will juſt obſerve, that, if the propoſed ten veſſels are put under the charge of intelligent induſtrious people, one or two good fiſhers put on board each, and the crews made up of hardy Highlandmen, although they may perhaps know but very little of the buſineſs, if they are willing to learn, keeping in view the ſucceſs of the Dutch, and what we may do, as we acquire knowledge at ſo much leſs expence of almoſt every thing, tear and wear of veſſels in particular, I will venture to ſtate the average chance of ſucceſs and profits at from 40 to 50 per cent. per annum, on the capital employed; and it may even exceed this—what, from cod-fiſhing, herring-fiſhing, with the various other ſpecies of fiſh that may be turned to account, white fiſh may continue to yield near the ſame prices they do at preſent, after allowing very good wages to all hands employed.

The ſtation where this fiſhery ſhall be carried on will very quickly become reſpectable. The ſervants of the Company being in permanent employ, whoſe earnings will

will be regular, their expenditures will be expected, and may be depended upon, to be equally ſo. This will draw and attach a number of other ſettlers, as well boat fiſhers, poſſeſſed of a little property, as mechanics and others. The crews of the ten veſſels, at ten men and boys in each, make a hundred; and it is probable, that, when ſucceſs began to appear, the other ſervants and dependants of the Company, conſiſting of ſuperintendants, coopers, ſhip carpenters, rope, line, twine, and ſail makers, with various other labourers, &c. will be little ſhort of an equal number. Now, ſuppoſing the half of theſe married perſons, and each family to conſiſt of five perſons, old and young, this, with the unmarried perſons, makes the whole number depending upon the Company amount to ſix hundred ſouls, beſides the other ſettlers.

I will ſtate the regular wages of the native married fiſhers at 20s. per month; leſs may be allowed for the young ones. All fiſhermen ſhould have an intereſt in the ſucceſs of their labours, to encourage induſtrious exertions; it ſhould run upon the laſt of herrings taken by the veſſel in the ſeaſon, and upon the thouſand ſizeable fiſh, either of cod, ling, &c. taken by each individual, to be aſcertained from a regiſter to be kept on board for the purpoſe. Suppoſe this bounty amount to five or ſix pounds per annum; and as the wives and children, after they arrive at eight or nine years of age, may be employed in net-making, &c. for which they may draw five or ſix pounds more in the family, and bring the

earnings]

earnings of each up to 23l. or 24l. a-year—This, as the men are all the time to be maintained aboard, makes a very handſome proviſion, from which, with œconomy and prudent management, a part may be ſaved.

As it will be neceſſary to have a few ſhip carpenters at hand, to be ready to dreſs and pay the veſſels bottoms from time to time, as well as to repair any caſual accidents, one of theſe ſhould be a capable ſhip-builder, to act as foreman; and, that the wages of theſe may not lie a dead weight upon the concern, as it is to be hoped only a ſmall part of their time will be required for repairs, a ſtock of building materials ſhould be laid in, and keep them conſtantly employed in building more of theſe ſmall veſſels for the fiſhery. It would be doing eſſential ſervice to the country, to take a parcel of young lads apprentices, to be inſtructed in the buſineſs; this would have the double advantage of bringing the prices of theſe veſſels low, and, by increaſing the number of carpenters, encourage the practice of ſhip-building.

Were the returning profits of the concern progreſſively employed in building, fitting out, and uſing theſe veſſels in the fiſhery at ſundry different ſtations, this, with the ſpirit with which the plan will be taken up and carried on by many different adventurers, in conſequence of matters being put upon a proper footing, and ſhowing it to be a profitable buſineſs, will increaſe the number of theſe veſſels ſurpriſingly, and ſoon produce an extraordinary number of good fiſhermen, and in them the nation might

might always depend upon finding a valuable reſource of the hardieſt and beſt of ſeamen, which boat-fiſhers cannot be properly called.

After a few years perſeverance, when matters are fairly entered upon a good footing, the number of the Company's veſſels conſiderably encreaſed, and the fiſhermen have acquired a proper degree of knowledge, perhaps it will be prudent not to extend their practice farther; for, although I will not take upon me to preſcribe limits, yet I ſhould be ſorry to ſee any body of men attempt to graſp at any thing like a monopoly of the trade. What is wanted, and I would beg leave to be underſtood as recommending, is the ſetting a good example, patroniſing and encouraging all honeſt well meant endeavours in it, by furniſhing neceſſaries to poor adventurers, and buying their fiſh, &c. upon liberal principles, until it is fairly eſtabliſhed upon a firm ſolid baſis; when the increaſing number of veſſels may be ſold off upon equitable terms, to thoſe fiſhers whoſe ſavings may enable them to conjoin their ſtocks, and become adventurers on their own account, or they may be furniſhed to fiſhermen upon the ſame terms the merchants of Oſtend do to their fiſhermen.

There a proper fiſhing crew aſſociate themſelves together, and agree for a year certain with a ſhip owner, for a veſſel completely fitted for ſea, he furniſhing lines, trawl nets, &c. for which he draws two-fifths of the produce, and the crew the other three-fifths; proviſions, ſalt,

ſalt, and caſks, are laid in upon the general account, and paid for out of the firſt part of the fiſh money; they are always put up to public ſale immediately upon the veſſel's return to port from every voyage. The crew's three-fifths is divided among them, according to their own particular agreement; the young ones having leſs than the old experienced fiſhers; the captain having but a mere trifle more than the reſt, only he is allowed a ſmall matter from the owner for taking charge of the veſſel. The owners ſuſtain all the uſual tear and wear of ſhip and furniture; but for all accidental loſſes in cables, anchors, ſails, or ropes, it is a general concern, of which the crew pay three-fifths; and this ſerves as a great check and guard againſt neglect or careleſſneſs. Theſe compacts are ſanctioned in a particular manner by the laws of the country, and never are nor dare be violated. I do not pretend to know if the herring fiſhery is carried on by them in this manner or not; but, if it is, as the expence and riſk of nets is great, I ſuppoſe the crew muſt be entitled to a much leſs proportion of the produce than in the other.

This places the fiſhers upon the true principles of adventurers in the trade without the neceſſity of any capital, enſures the utmoſt œconomy, and muſt call forth the greateſt exertions of induſtry in the buſineſs, and is a meaſure that might be extremely applicable to the Highlands, after the inhabitants have acquired knowledge from a while's practice; and it may be done with the greateſt ſafety, as the veſſels, &c. may be inſured.

I am fully convinced, that a few years experience will make theſe people, naturally hardy, as good fiſhermen as any in Europe. As they acquire knowledge in the buſineſs, they will gradually acquire property; which, when they have once done, the ſcene will be agreeably changed with them indeed; proſpects will brighten, ſmiling induſtry and affluence will ſoon pervade every bay, creek, and valley of that ſo long neglected country. Then fiſhing matters may be in part reſigned to them, they being fully inſtructed in all the different operations of ſhip-building, equipping the various fiſhings, &c. every one of which will be conducted with much œconomy, ſkill, and induſtry. The conſequence of which will be, that fiſh will be furniſhed at more moderate rates, and, perhaps, with half the prices they preſently yield, it will be a more profitable buſineſs.

For ſeveral years at firſt, the Company will be under the neceſſity of providing a regular and ſufficient ſupply of proviſions and other neceſſaries, not only for their fiſhers, but the other ſettlers immediately dependent upon them; nor can this be attended with any inconvenience or loſs, but rather an advantage, that they be paid for their labour partly in uſeful articles, as the Company can lay in every thing upon the beſt terms, and have them delivered by the veſſels that are freighted from time to time to call at the different ſtations to carry their fiſh to market. By this means they can furniſh theſe articles on the loweſt terms, to the mutual advantage of all parties.

It would be of much conſequence that the Company cauſed pay the utmoſt attention to the cure of their fiſh, either wet or dry, and encourage every attempt to contrive doing it various ways, to make them ſuitable to different taſtes and for different markets; and it would be neceſſary that they correſponded with the Britiſh conſuls or principal merchants at the different ports of Europe, to take their opinion and advice anent the quantity and quality fitting for each, and cauſe care to be taken that what is ſent to each be according to orders, that the character of our fiſh be eſtabliſhed on a ſolid footing.

When fiſhing, curing, and exporting have been practiſed ſome time, the Company will have it in their power to point out to the Legiſlature the enactment of ſuch laws as bid faireſt for enforcing a proper compliance to ſuch regulations as may give the beſt chance for retaining advantages thus gained.

Perhaps it will be found prudent, when theſe foreign markets are once fully and fairly tried, and the utmoſt extent of ſales aſcertained, to recommend, that a proper underſtanding be ſupported among the fiſh exporters in general, ſo as to prevent the danger of any particular market being overſtocked, or glutted with an extra quantity, to depreciate their value below what they can poſſibly be furniſhed for without loſs, to the manifeſt injury not only of the individuals concerned, but to the nation at large. I apprehend the ſureſt way to enhance a demand, and ſecure a conſumpt of any commodity, is to furniſh it upon

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as low and equitable terms as poſſible; but, if ever it is reduced under that, it is no eaſy matter to raiſe it to its proper level again; in doing which, both the expoſers and conſumers may ſuffer, either by having ſales retarded, or the market not regularly ſupplied for fear of a loſs.

I know it is ſuppoſed by many ſenſible men who have not accuſtomed themſelves to inveſtigate the matter cloſely, that, were our fiſheries carried on to any conſiderable extent, it would not be poſſible to find markets for them; but let us not be afraid of this. If we had ſeveral hundred veſſels ſucceſsfully employed, markets will be found. Britain within itſelf contains a mart for ſome thouſand tons annually (and this will always be found the ſureſt); every town, village, hamlet, or cottage in it, will contribute to the conſumpt, when they are preſented in good condition and at reaſonable rates; and it will be doing eſſential ſervice to the conſumer, as well as the fiſher, to furniſh them upon ſuch, when it may well be ſuppoſed the large manufacturing towns of Mancheſter, Leeds, Birmingham, Nottingham, Sheffield, &c. would conſume vaſt quantities.

Even rival nations, although policy may dictate to them not to permit the purchaſe of an article the capture of which may be ſuppoſed to contribute to the ſtrength of the ſo much envied Britiſh navy, yet it is to be hoped humanity will prompt them not to refuſe their ſubjects the bleſſing of a valuable, wholeſome and nouriſhing ali-

ment, when offered to them at the low price at which we will be able to afford it.

To bring matters to this happy ſtate, I will again repeat it, that nothing will more contribute or ſo ſoon accompliſh it, as a Company, the baſis of whoſe principles are formed upon a generous and patriotic regard for the honour and intereſt of their country, in the execution of which, they may highly promote their own intereſt, and conſign their names to poſterity with the higheſt honour. Such a Company, as is before ſaid, can better afford the expence of introducing the ſo much wanted improvements neceſſary to eſtabliſh our fiſheries upon a good footing than private adventurers; nor can they, in their diſunited and unconnected ſtate, be ſuppoſed capable of making much exertion in endeavouring to open new markets, as the execution of this muſt unavoidably be attended with expence, ſome riſk, and detention or outlay, ſufficient to deter thoſe whoſe quantity is ſmall from expoſing themſelves to the hazard, that would be but trivial to a connected body, who might depend upon having any ſmall caſual loſs at one place amply compenſated by advantages gained at another.

The duration of the contract for proſecuting the fiſheries may be optional; but it may be depended upon, that from ſeven to fourteen years practice will produce a ſurpriſing revolution in this branch, when the farther neceſſity of bounties will be done away, and the ſtate be yet amply rewarded for the immenſe ſums that have been beſtowed

ſtowed upon it to ſo little purpoſe hitherto: When a flouriſhing branch of the Britiſh commerce is fairly eſtabliſhed, and a regular foundation laid for breeding a numerous body of hardy ſeamen, then may we with ſome propriety and confidence apply to, and call for the aid of Government to cut canals and highways, build bridges, &c. where neceſſary for forwarding theſe national purpoſes.

The profits of the concern may enable the Company to carry on other patriotic deſigns, if they find themſelves ſo diſpoſed, ſuch as eſtabliſhing coarſe manufactures, adapted to the ſituation and circumſtances of the country, opening metallic mines, and, above all other things, working coalleries; for next to a want of proviſions will the want of firing be felt in the new villages; and in vain will it be to ſuppoſe any other method can be deviſed for the preparation of peat or turf than the common one, which is both a precarious and laborious work in any country, even when moſs is nearly ſituated, and muſt be particularly ſo where it is ſo ſubject to rain as the weſt coaſt is ſaid to be.

It is upwards of eighty years ſince Martin and others gave accounts of there being the appearance of coals in Mull, Ardnamurchan, and Sky; and Dr Anderſon has confirmed this in his late report. Such of them as are found moſt centrically ſituated, and where there is a proſpect of their being eaſily cleared by water levels, ſo as to be wrought at little expence, ſhould be opened; and here

ſaltworks

ſaltworks ſhould be erected, that this ſo eſſential article for the fiſheries may be furniſhed to them in the readieſt manner, and upon the beſt terms, which, in the event of coals being opened, will be the caſe, by having the rock ſalt from the neighbourhood of Liverpool delivered at an eaſy freight by veſſels bound to the eaſt country.

C. F.

LETTER XII.

SIR,

SINCE theſe letters were begun, I have got a copy of the new fiſhery bill—With humble deference, I beg leave to make a few remarks upon it.

The alteration in the mode of bounty is undoubtedly a good one, properly enough adapted for promoting induſtry; and that of allowing a ſhilling per barrel of herrings to boat fiſhers, extremely proper indeed. Had it been a little more explicit, how the quantity is to be aſcertained, it had been well, and perhaps have ſaved ſome trouble: But vain would it have been to expect to ſee a perfect bill; for, in the preſent, which, however old, may only be termed an infantine ſtate of the fiſheries, who can ſay what clauſes would make a perfect one? However, if the gentlemen, who have ſo warmly and worthily intereſted themſelves in the cauſe, ſhall continue their enquiries, endeavour to introduce improvements, and ſtudy the effects they gradually produce, it may, and

I hope will, in the courſe of a few years, bring matters much nearer to perfection than they are at preſent.

The additional trouble or expence, to have included the whole of the unrepealed clauſes of former bills, would have been ſo trifling, that it is a pity it was not done; for there are many perſons who will wiſh, and are intereſted to know the full import of the law, that perhaps have not an opportunity of procuring thoſe referred to.

It is ſurpriſing to think upon what principles the framer of the bill (for I cannot think it could be the meaning of the Legiſlature) could ſuppoſe that veſſels built in 1779, or a few years prior to 1780, ſhould be ſo worn out in the courſe of theſe few years, as to be deemed unworthy of being admitted upon the bounty. This is too tantalizing to be taken for the real intent of a Britiſh Parliament, as it throws ſuch an extraordinary impediment in the way of a numerous body of people, whom the bill was expreſsly meant to ſerve, as being conſiderable adventurers in the trade, having inveſted a conſiderable part of their property, many of them their all, and perhaps ſome of them much more, in building and purchaſing for the fiſhery ſuch veſſels as were thought fit for the purpoſe. If Government is really ſerious in their intention of encouraging adventurers in the fiſhery, what is it to them although the veſſels are twice ſix years old, if they are Britiſh built, and if they are properly equipped? The premium upon the deep ſea fiſhery is a very

good

good mode of encouraging that practice: There might have been another ſet inſtituted for the north-weſt coaſt; for there, it is certain, that method of fiſhing well may, and certainly will, be carried on ſome time or other.

The ſalt laws relating to the fiſhery have met with conſiderable improvement, but they are ſtill very deficient to what they ſhould be, to give full freedom, nor will perhaps the ſecurity of collecting the revenue from the article permit of their being ſo, until they are totally altered. It would be much for the advantage of the public, that Lord Dundonald's plan of commuting the duty were adopted: This would ſave much expence in the collecting, as well as trouble, and completely relieve the fiſheries.

Salt may now be imported from England for the fiſheries, whereby they will be ſerved rather lower than uſual; and it is ſaid Liverpool ſalt is of a better quality; there they no doubt can afford to manufacture it cheaper than it can be done in Scotland, on account of having the rock ſalt; but that it ſhould be allowed to be charged 1s. 6d. per buſhel in the Frith of Forth, when it ſells for 10d. at Shields, is a paradox not altogether unworthy of public notice: True it is, that what is bought for the Iceland fiſhery is only charged 8d. in the Forth; but all that is bought for the conſumpt of the country, and the home fiſheries, is unvariably charged 1s. 6d.—and on this account, and the duty, the poor fiſhers all along the north-eaſt coaſt, who uſe ſeveral thouſands annually,

cannot

cannot buy a buſhel under the extravagant price of 3s. 4d. or 3s. 6d. each; of this I am certain, having had occaſion to pay it very lately, in a ſmall fiſhing adventure I happened to be concerned in.

Salt is only allowed duty free for the herring and Iceland cod fiſhery, or the cure of what cod is taken during the herring fiſhing ſeaſon. The duty muſt be paid for all ſalt uſed in curing cod, ling, tuſk, &c. that are taken upon the coaſt before and after the herring ſeaſon, or at all times, if taken by boats or veſſels not employed in the herring fiſhery. A debenture is indeed drawn for ſuch fiſh, when exported; but nothing is recovered for what is uſed at home. Why this diſcrimination in favour of the Iceland fiſhery, and why is the Newfoundland fiſhery ſtill more favoured than the Iceland, while our own home fiſheries are ſo oppreſſed?

It is to be obſerved, that ſalt is only uſed in the cure of ſuch fiſh as are to be kept for ſome time, or ſent to diſtant corners of countries not ſo happily ſituated for the ſupply of this valuable article of food: Therefore, humanity points out the propriety of relieving this one, taken from the ocean at the hazard of ſo many lives, from every reſtraint, ſo as it may be furniſhed at the loweſt expence. Were even the free importation of ſalt from Liverpool, upon payment of the Scots duty, permitted, the poor fiſhers might be ſupplied much cheaper than they are at preſent, the price there being only 6d. per buſhel, allowing 10s. freight per ton or 40 buſhels

buſhels, which is 3d. the buſhel—at this freight I know it could be landed upon the eaſt coaſt, and it would ſtand only half the prime coſt at the Salt-works in the Frith of Forth.

The bounty veſſels are now very properly allowed to enter upon the fiſhery as early as the firſt of June.—It is a certain fact, that, for theſe ſeveral years bypaſt, herrings have been ſeen in very large bodies upon the eaſt coaſt in May, and even ſometimes in April. It is well known, that thoſe taken in June are ſo very fat, rich, and tender, that the Dutch, Hamburghers, &c. encourage bringing them as ſoon to market as poſſible, as they eſteem them a great delicacy, and pay a high price for them: Therefore, ſmall veſſels, called yangers, attend the Dutch fleet, to carry all taken prior to the middle of July directly home for immediate uſe, before they are long in the ſalt, as they are reckoned too tender for curing and repacking.

By keeping theſe rich tender fiſh three months in ſalt, and that in their bloody pickle too, as our veſſels are obliged to do, unleſs they make full cargoes ſooner, it is obvious, their flavour muſt be injured, and their value leſſened. When we have more knowledge of the trade, encouragement will be held out to ſend theſe fiſh to market as ſoon as it can be done; for inſtance, it will be recommended to thoſe fiſhing on the north-eaſt coaſt, to land their firſt taken fiſh, from time to time, either at Shetland, Orkney, Peterhead, Aberdeen, &c. ſo as they may

may be ſent to the ſouthward without loſs of time; and it is probable, that, in proceſs of time, the manufacturing towns, both of Scotland and England, may offer annual premiums for the firſt certain quantity of herrings ſent for their ſupply.

The clauſe permitting the bounty veſſels to buy herrings of the country boats has been ſlightly touched upon already; they are, however, prohibited from returning to their own ports within leſs than three months, if they have purchaſed any part of their fiſh, although their cargoes were completed much ſooner. Now, I will beg leave to make a ſuppoſition, that, for the firſt three weeks after the fiſhing veſſels arrive at the ground, the fiſhery has but an indifferent appearance, yet one of them happens to fall into a loch where a good many of the country boats are employed, from whom the maſter purchaſes, in the courſe of this time, 20 or 30 barrels of herrings; the next week the fiſh ſets into this loch ſo abundantly, that their own boats complete their cargo, and they might go home, but they muſt loſe two months time, and retard their ſales, for they dare not return until their three months are expired, but at the certain loſs of their bounty money, unleſs they perjure themſelves, by taking a falſe oath, that the whole was caught by themſelves.

Were the ciſterns recommended in theſe letters built, and a proper ſtock of ſalt kept in them, there the fiſh taken by the country boats may be depoſited and cured; and if the bounty veſſels have not completed their cargoes

within their time, they may buy them here at the end of it.

If, on the other hand, the fiſhery ſhall at any time prove a very abundant one, as ſometimes has happened, and if the ciſterns were many and large, with a plentiful ſtock of ſalt in them, the veſſels, after completing their cargoes, may remain fiſhing while the herrings continue in the lochs or upon the coaſt, depoſiting them in the ciſterns until they are filled, whereby they might perhaps have one or two extra cargoes each to return with caſks for; and it is poſſible that, by this means, all the three cargoes might be landed in the Frith of Clyde, or other diſtant ports, in little more than three months, even by the preſent practice of fiſhing, although it is far from being the beſt.

At preſent, the real value of herrings is but little known in many ſea-port towns of the iſlands, and far leſs in the interior parts of it. Of this, the author of a very ſenſible pamphlet, entitled the *Fiſheries Revived*, wrote about the year 1749, ſeemed well convinced, when, in his ſcheme for carrying on the *Free Britiſh Fiſhery*, he ſaid: "And whereas encouraging the conſumpt of fiſh in 'Great Britain would be of as great benefit to the un-'dertakers of this trade as to the nation in general, 'Therefore, if the Commiſſioners for granting wine and 'ale licences, were to be empowered to grant to every 'perſon that comes for ſuch licences, the ſaid licence of '5s. leſs, upon condition that they take one barrel of herrings;

'herrings;—if two barrels 7s. 6d.—and if three at 10s.
'leſs, if the ſaid perſons make oath that the ſaid her-
'rings are for their own uſe only." Were the fiſheries proſecuted with ſpirit, ſo as quantities could be furniſhed upon reaſonable terms, and if ſuch a meaſure as the foregoing was adopted, and taking a certain quantity of herrings enjoined, or even recommended, although the bounty granted to vintners and beerhouſe keepers were much leſs than the foregoing, and only the export debenture at 2s. 8d. it might be the happy means of ſpreading a reliſh for them among all claſſes of people, and thereby contribute, in part, to keep down the price of proviſions: Of how much conſequence this is in any, but particularly a populous manufacturing country, is too obvious to need illuſtration.

It is not ſo much the importance of the fiſheries that I meant to have inſiſted upon, as the propriety of the meaſure ſeems pretty well admitted: But I am ſorry to ſay, that the practicability of making it a profitable buſineſs is not ſo well believed; for our many blundering diſappointments have fixed a rooted belief in the minds of the generality of people, that it cannot ſucceed in our hands. It was a ſuppoſition of this being the caſe that induced the writer of theſe letters humbly to offer a few ſentiments on the ſubject, the reſult of many years deliberate attention. It is true, there are many of them in the true ſtate of ſpeculation; bnt the grandeſt inventions, or greateſt diſcoveries ever made in arts and ſciences, could at firſt be viewed in no other light than merely ſpeculative,

tive, until reduced to practice, nor can it be ſuppoſed poſſible that new improvements can be introduced by any other means. It is hoped thoſe ſuggeſted here will not be thought irrational: If they are attended to, there are others in reſerve, that will perhaps be brought forward; for it will give him infinite pleaſure to contribute what he can to render the profeſſion of a *Caledonian Fiſher* both profitable and reſpectable.

C. F.

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